

Australian

MARCH/APRIL 1978. ISSUE 89. Vol. 8 No. 8

Andrew &

90c*

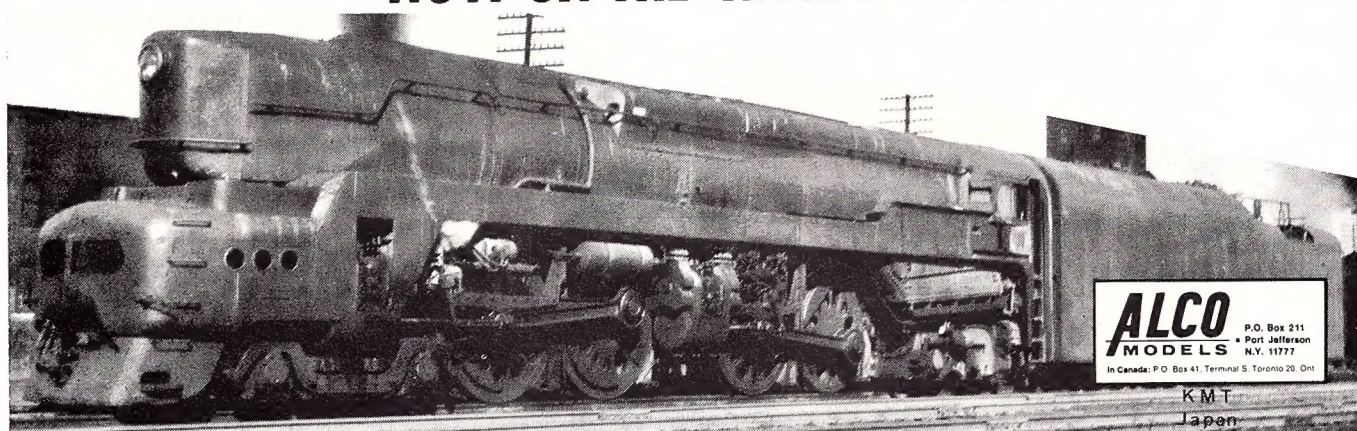
MODEL RAILWAY

Magazine

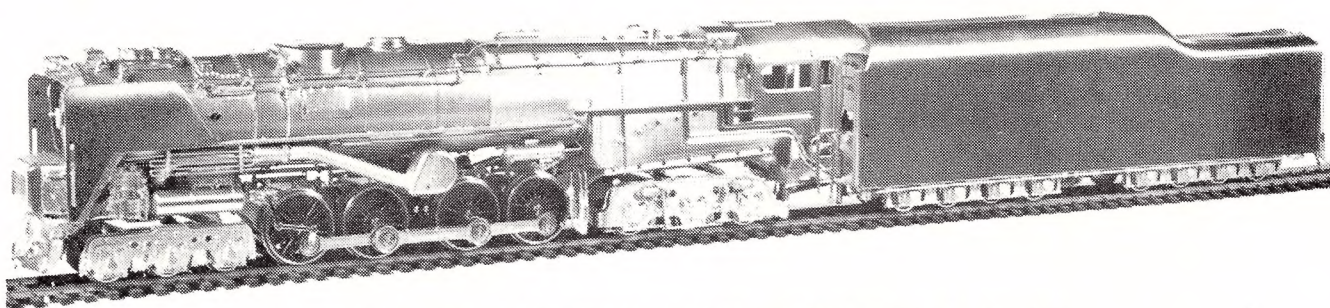


Registered for posting as a periodical — Category B.
Recommended retail price only.

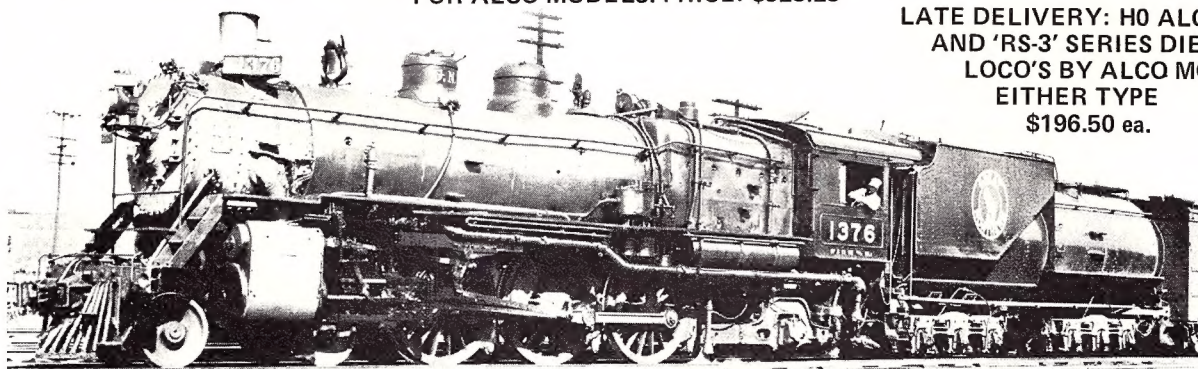
NEW MOTIVE POWER — NOW ON THE 'READY TRACK'



VIEW SHOWS PROTOTYPE OF FAMOUS P.R.R. 4-4-4-4 'T-1' DUPLEX
NOW AVAILABLE FROM THE SHOPS OF KUMATA IN H0 SCALE.
UNPAINTED: \$442.50. PAINTED & FINISHED: Due April

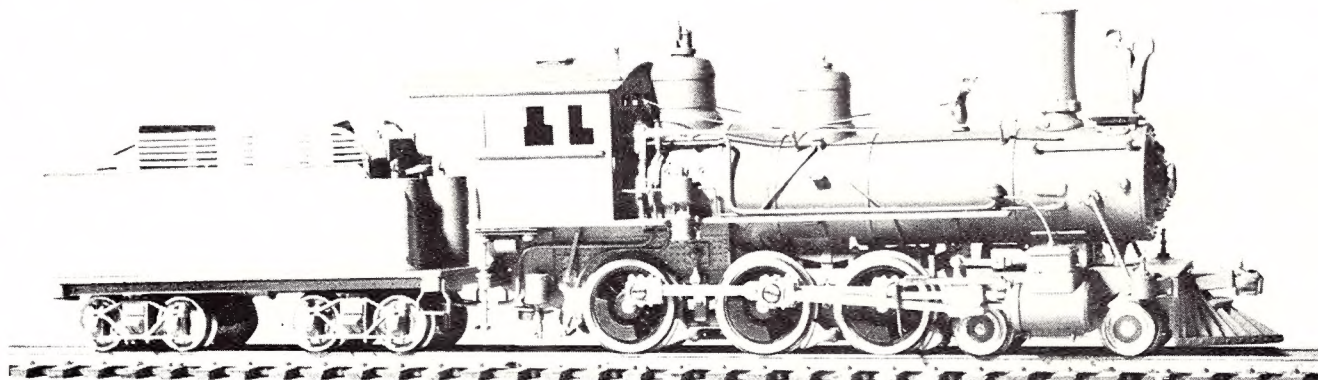


H0 P.R.R. 6-8-6 'S-2' STEAM TURBINE LOCOMOTIVE & TENDER.
THE OTHER REVOLUTIONARY STEAMER OF THE PENNSY SYSTEM. OUTSHIPPED BY KUMATA
FOR ALCO MODELS. PRICE: \$523.25



THE PROTOTYPE OF WESTSIDE'S NEW G.N. 'H-7' SERIES PACIFIC.
THE LARGEST CLASS OF THE G.N.'s PACIFIC LOCOMOTIVES. H0 SCALE
PRICE: \$232.00

LATE DELIVERY: H0 ALCO 'RS-2'
AND 'RS-3' SERIES DIESEL
LOCO'S BY ALCO MODELS.
EITHER TYPE
\$196.50 ea.

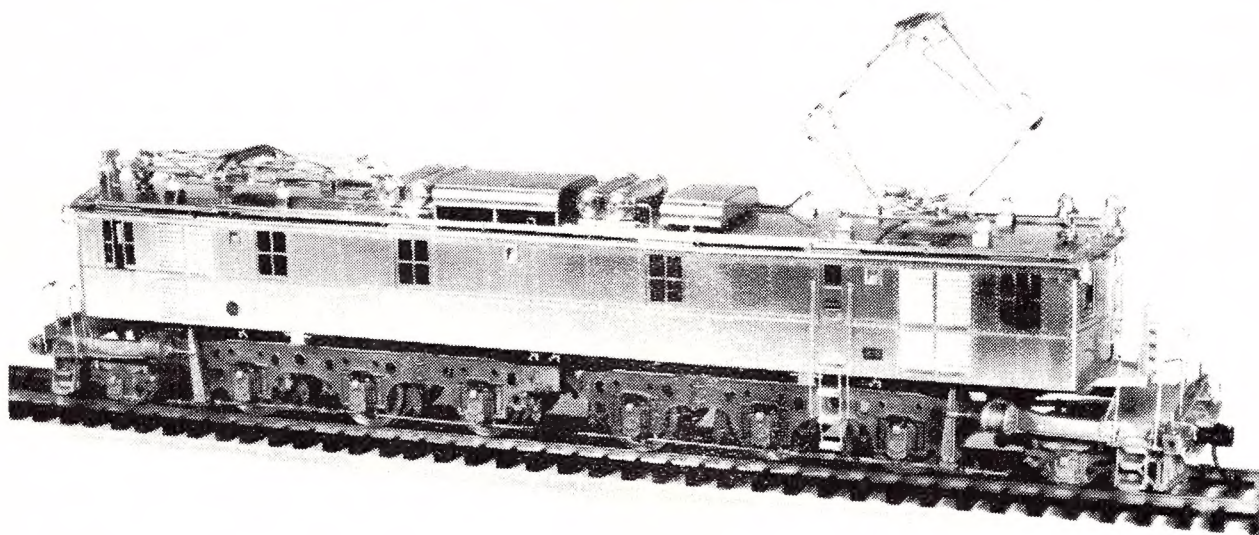


H0 COLORADO MIDLAND 4-6-0 LOCO & TENDER . . . BY HALLMARK. PRICE: \$197.00

SOLE AGENT & IMPORTER

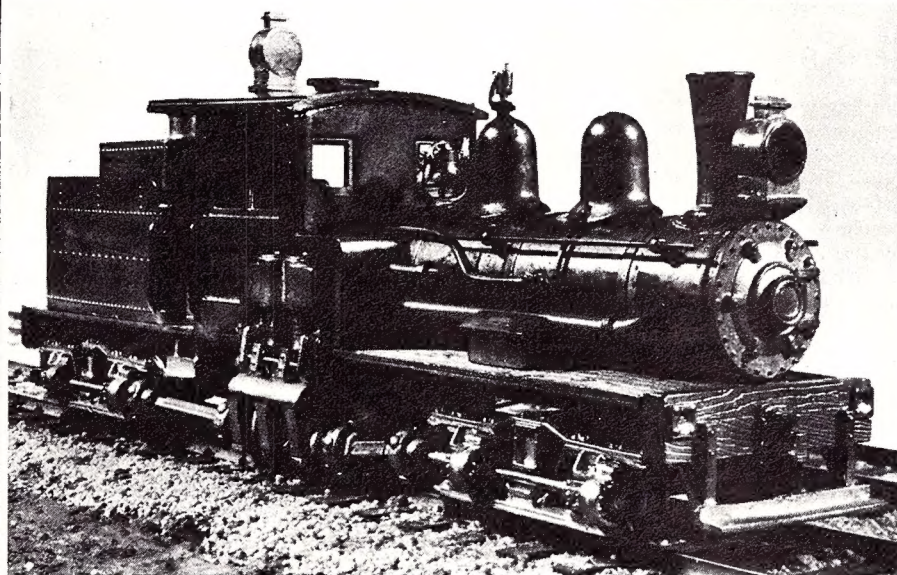
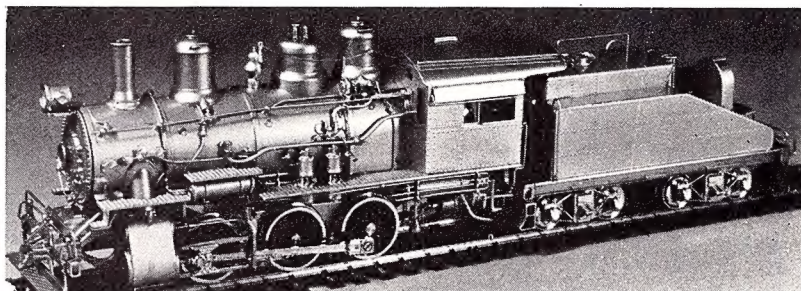
THE MODEL DOCKYARD PTY. LTD.
216-218 SWANSTON ST. MELBOURNE. PHONE: 663 3505

NEW MOTIVE POWER.... — NOW ON THE 'READY TRACK'

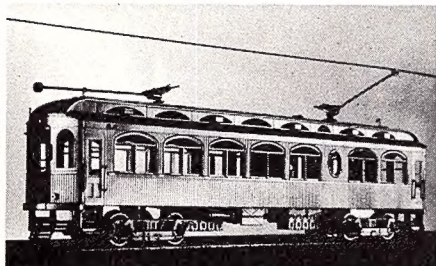


**THE MASSIVE 'O' GAUGE G.N. 1-C+C-1 ELECTRIC LOCOMOTIVE
BY ALCO MODELS (See our Sept/Oct notes) PRICE: \$1046.00**

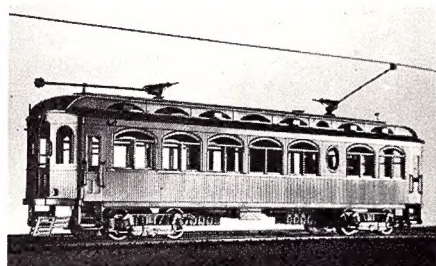
**H0 A.T.&S.F. 0-6-0
2100 SERIES
SWITCHER & TENDER
by HALLMARK MODELS
PRICE: \$197.00**



**KEYSTONE 20 TON
CLASS 'A' SHAY GEARED
LOCOMOTIVE KIT. H0,
UNPOWERED. DIE-CAST
METAL CONSTRUCTION.
FRAME CORED FOR
KD COUPLERS. FRAME,
CAB & BOILER KEYED
FOR EASY ASSEMBLY.
OPTIONAL OIL BUNKER.
SHOTGUN OR WOOD-
BURNING STACK.
PRICE: \$50.50
(Motorising kit
coming later)**



**CHICAGO, AURORA & ELGIN
RAILROAD INTERURBAN
CARS. H0 SCALE, WOOD
TYPE MOTOR CARS.
ORIGINAL NILES' 300 SERIES
ON RIGHT, WITH EXPOSED
SIDE DILL. KUHLMAN 311
SERIES AT LEFT. PRICE,
EITHER TYPE: \$116.00**



**SOLE AGENT & IMPORTER
THE MODEL DOCKYARD PTY. LTD.
216-218 SWANSTON ST. MELBOURNE. PHONE: 663 3505**

EXPRESS MAIL ORDER

FOR

RIVAROSSI

WE HAVE EXTENSIVE STOCKS OF RIVAROSSI HO and N — Both Continental and USA Prototypes.

Other stocks include, PECO; RATIO; SENTINEL; LIMA and ROMFORD.

Current stock/Price lists 30c stamps. Please specify if HO/OO or N lists required.

P.J.P. PRODUCTIONS

Since 1938 (Daly St)
Box 14, Post Office,
GISBORNE, Victoria.
3437
Phone (054) 28 2170

MACARTHUR HOBBY CENTRE

THE MODEL RAILWAY SPECIALISTS

MAIL ORDER A PLEASURE — Please send a SSAE for reply.



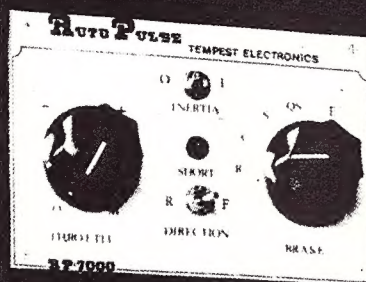
We stock both HO & N gauge equipment: Prototype • Roundhouse • Rivarossi • Arnold • Peco • Friedmont • M.R.C. • Hornby • Lima • Minitrix • H & M • Atlas • Lifelike • Kadee • Heljan • Vollmer • Ratio • Kalmbach • Superquick • M.G.W. • Romford • Locomotion • BA Screws & Taps • Scratchbuilding Supplies. •

Now Available: Castings & drawings for working model Steam Engines. We also have an adjoining carpentry shop Baseboards • off-cuts • etc.

82 GRAHAM HILL RD. NARELLAN. N.S.W. 2567

Phone (046) 46 1643 for business hours. If unanswered phone (046) 66 9974.

At last! Realistic Scale Speeds



AP7000 AUTOPULSE THROTTLE

Add a new dimension to your layout with this remarkable electronic controller. Drive your trains smoothly with speeds as slowly as 1/4" in 30 seconds using throttle only (similar to rheostat) or ... switch to "Inertia"; set the throttle and watch the train slowly build up to pre-set speed. Then bring it to a gradual stop or select from 3 other brake speeds.

● Fully protected electronic circuit.

● 2 year guarantee.

● \$35.16 from dealers in your State.

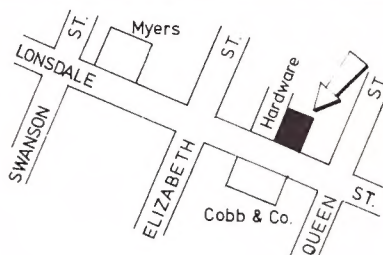
For further information, send 9 x 4 S.S.A.E.

TEMPEST ELECTRONICS

33 Borg St. Scoresby, Vic 3179 Tel 763 5584

ARCADE HOBBIES

SHOP 10, FIRST FLOOR
LONSDALE STREET PLAZA
399 LONSDALE STREET
MELBOURNE 3000
PHONE (03) 60 1803



BJ MODELS STRUCTURES
RAIL TRANSPORT MUSEUM
TRANSFERS
LINING TAPE

FLEXI-GRIT FINISHING FILM
TRIANG-MINIC CARS, TRUCKS,
TRACK

MEHANOTEHNIKA, PECO, LIMA,
RATIO, SLATERS, ROUNDHOUSE,
MRC, KADEE, HELJAN, LIFE-LIKE,
AND CAN IMPORT ANY ITEM IN
THE WALTHERS' O, N, & HO
DECAL

AND MILITARY MINATURE
CATALOGUES

YOUR 48 HR MAIL ORDER SPECIALISTS



ARCADE HOBBIES.

Märklin HO



H. & E.M. SIMON & SON

SPECIALISTS IN EUROPEAN
PROTOTYPE MODEL RAILWAY
EQUIPMENT

MARKLIN, FLEISCHMANN,
ELECTROTREN,
MEHANOTEHNIKA

RETAIL SALES, SERVICE, REPAIRS

KITS, SCENIC MATERIALS.
MAIL ORDER
WELCOME.

23 HARVEY STREET EAST
WOODVILLE PARK, SOUTH AUST. 5011
Phone (08) 45 1219

Australasian Model Railroad Magazine

SCR Publications

P.O. Box 235

Matrville

2036

027819

Dear Subscriber,

May I thank you for your interest in our magazine and for your subscription. Recently, due to increasing inflation in the Australian economy, we were forced to increase the price of the AUSTRALASIAN MODEL RAILROAD MAGAZINE, which automatically increased the subscription rate. Unfortunately the money you sent with your subscription was insufficient to cover a full subscription.

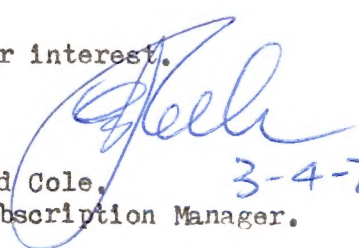
To save individual letter writing, with long explanations, as well as postage, we have decided to allot you ^{FOUR} issues of A.M.R.M., plus a credit of \$1.00.

Your subscription will expire with the ⁵¹⁰⁰¹ issue No 92. issue, which will include, with-in, a subscription reminder notice.

Please use this letter as a credit note. It can be used for part payment of either "back issues" or for part of your next subscription.

Thank you for your interest.

Regards,


Ted Cole,
Subscription Manager.

3-4-78

Name J.C. KIDD Subc No. 52116-05

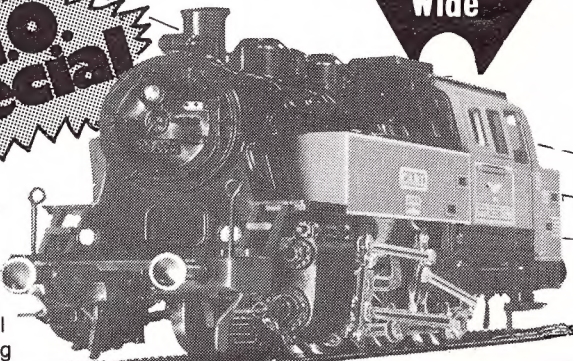
Address THE EYRIE

RIDGE RD.
KALORAMA VIC 3766

Bill Webb's Mail Order

H.O. Special

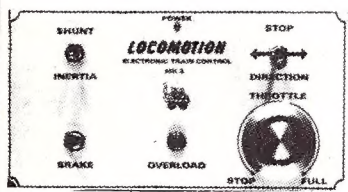
"N" gauge Rack Rail
7307 Rack and pinion electric loco.
Climbs 1 in 4 \$46.17
8056 Branch line coach \$6.99
9119 Flexible Rack rail track 222mm (9 3/4") long \$1.50



SPECIAL OFFER in HO
4028 Rack and pinion 0-6-0- tank Loco. Climb 35% gradient
5001 Passenger coach
6411 Rack rail & chairs 3 x 8"

The lot for **\$58**

Offer ends May 1978



LOCOMOTION
Solid State ELECTRONIC TRAIN CONTROLLER for more pleasure and realistic operation of your railway system whether it be — HO, N, L.G.B. (no. 1) or MARKLIN 3 Rail.
We have the controller to suit all makes. Australian Made and guaranteed for 6 months. Two models currently available are —

1. MK 3
This unit is designed for 2 Rail 12 volt DC systems, operates off any 12-20v AC source — plugs into the 16v AC terminals on your existing transformer (or we can supply low cost transformer to suit). It has switch for Shunt — direct control from throttle — or Inertia — slow start, slow stop. Press button brake, short circuit and overload proof. These units are now in use throughout Australia with complete satisfaction — a must for every serious modeller and our price is only \$42.00 incl. postage.

2. MARKLIN OWNERS MODEL 3 RAIL AC
Same as MK 3 above but with Special additional unit and switch for perfect reversing and forward running. Just connect to Yellow & Brown terminals on existing Marklin Controller. We are Sole distributor of this unit.
WRITE WITH S.A.E. 20c FOR FULL DETAILS.

- CATALOGUES (Post Paid)**
- ... MARKLIN HAMO D.C. Catalogue **S.A.E. 1.30**
 - ... MARKLIN A.C. Catalogue **.60c**
 - ... HAG HO Catalogue **1.20**
 - ... VOLLMER Catalogue **1.40**
 - ... PECO Catalogue HO **1.40**
 - ... PECO Catalogue N **1.40**
 - ... SEUTHE Smoke Generator Brochure **.20c**
 - ... Locomotion Controller details **S.A.E.**
 - ... KIBRI **\$1.35**

Fleischmann's latest publication release. Crammed full with full colour photos. A must for every enthusiast. Send for yours now!



NEW 77-78 CATALOGUE
\$2



Quality and Precision in suburb Swiss prototype Electric Locomotives. This equipment is for the collector and discerning modeller. Each locomotive is of metal construction with fine detail.

A powerful motor that gives enormous pulling power is the secret to their outstanding running performance. The driving wheels are rubbertyred and all axles are borne on brass sleeves.

Priced from **\$96.28.**



Run another train on existing trackwork — electrify your HO or N gauge layout using Vollmer true-to-life OVERHEAD CATENARY. Yes... we stock the full range.

Vollmer Stone Sheetting (12" x 8") is a great building material has self adhesive backing and template for making bridges, piers, walls, tunnel portals etc.

Price only **\$2.20 per sheet.**



Have you thought of writing to us for your Marklin Equipment. Our stocks are growing steadily. We now have the full range (YES! THE FULL RANGE!) of "M" and "K" track, and also ALL the new items for '77. We list some below —
3099 4-6-0- Loco class 38
4136 Express Coach — green
4137 Express Baggage — green
3042 German electric express
3057 German electric freight
3028 German Rail Car
4028 Control Car for 3028
ALL AT COMPETITIVE PRICES.

HAMMO
We stock the complete range of these superb — most steam locos have metal bodies — 2 rail DC locomotives. And DO NOT FORGET the Locomotion CONTROLLER especially for MARKLIN 3 rail.



Taking orders now for British "Royal Scot" Loco and coaches. Competitive prices — write for details.

STOCK NEWS
HO Turntables now due April/May '78.
QUEENSLAND MODELLERS' NOTE.
Come and meet us at Lang Park Exhibition April 29/May 1st 1978.

BILL WEBB'S MAIL ORDER
BOX 68, P.O. FIGTREE 2525
PHONE WOLLONGONG (042) 29 5824
Showroom — 21 Meares Ave, Mangerton
Inspection by appointment only.

Join our many **LAY-BY CUSTOMERS** **POSTAGE**
Orders up to \$15 add 60c
Orders over \$15 post free
PAY C.O.D.
Small Handling fee applicable
Please debit my Bankcard account number

Signature _____
Expiry Date _____

australia's largest retailer of FLEISCHMANN

MAGNIFICENT FLEISCHMANN — just where do we begin to list part of our 494 separate items of stock from this manufacturer? (We try to stock 98% of all items listed in catalogue plus spare parts.)

- HO GAUGE**
Some of 44 different locos in stock:
- | | |
|--|---------|
| 4000 0-4-0 tank. Black/red | \$24.67 |
| 4141 2-6-0 Tender. Black/red | 67.40 |
| 4177 2-10-0 heavy goods. Black | 94.84 |
| 4200 Diesel Shunter. Red | 26.20 |
| 4246 British Warship class diesel, green | 65.34 |
| 4340 Swiss Re 4/4' BoBo elect. | 68.64 |
| 4375 German TEE CoCo electric | 74.88 |
| 4430 German 614 class railcar set. Orange/grey. 537mm long | 94.38 |
| 4432 Additional trailer coach for 4430 | 16.95 |
| 4400 Rail bus set | 55.85 |
- From 145 different types of rolling stock — we list —
12 economy vehicles from \$2.52 to \$4.24
- | | |
|--------------------------------|-------|
| 5050 German mail car, green | 11.65 |
| 5105 German dining. Bogie. Red | 13.73 |
| 5133 Swiss Express coach | 13.73 |
| 5147 British 3rd class coach | 14.82 |
| 5285 Autorail with 8 cars | 18.59 |
| 5471 Shell bogie tanker | 11.97 |
| 5597 Wrecking train. 4 units | 56.16 |

- N gauge — "Piccolo"**
From a massive array of models —
- | | |
|---|-------|
| 7000 0-4-0 Tank/loco black/red metal body | 28.00 |
| 7160 4-6-0 Tender loco. Black/red | 57.72 |
| 7177 2-10-0 heavy goods loco | 71.76 |
| 7360 French BoBo elect. green | 55.67 |
| 7430 2 coach diesel rail car set orange/grey 334mm long | 67.40 |
| 7432 Additional trailer for 7430 | 14.87 |
| 8051 Old-time German coach | 6.12 |
| 8112 German dining — Bogies — red | 9.85 |
| 8151 French express coach. Bogie | 10.49 |
| 8285 Autorail with 8 cars | 12.36 |
- AND IF YOU WANT TROUBLE FREE RUNNING...
INVEST IN Fleischmann "N" Track... it's expensive but is value for money.
STOP PRESS
Post S.A.E. for full details. New items for 1978.



SEUTHE Smoke Generators
Units to suit most makes of Loco in HO, O & No. 1 (L.G.B.) gauge. Also units for houses, factories, ships.
Whether Loco has plastic or metal body, standard or thin smoke stack, we can fit them all.

Please forward...
☐ PRICE LISTS ☐ MODEL No.
☐ DESCRIPTION ☐ CATALOGUE
I enclose \$ _____ postal note/cheque
NAME _____
ADDRESS _____
P/Code _____

ONE OF QUEENSLANDS LARGEST RETAIL STOCKISTS OF BOTH HO GAUGE AND N GAUGE ELECTRIC TRAINS AND ACCESSORIES.

VALLEY TOYWORLD

OUR RANGE COVERS:—

HO GAUGE, LIMA, RIVAROSSA, JOUEF, BACHMANN, LIFELIKE, TYCO.

N GAUGE, ATLAS-RIVAROSSA, MINITRIX, LIFELIKE, PECO, BACHMANN, LIMA.

SOME OF OUR KITS:—

KIBRI — POLA — VOLLMER — VAU-PE — JOUEF — AIRFIX — LIFELIKE — RATIO — ROUNDHOUSE — TYCO.

CUSTOMER SERVICE IS OUR AIM — IF WE HAVENT GOT IT, WE WILL TRY TO GET IT!

CALL IN AND SEE OUR RANGE. REPAIRS GLADLY DONE.

VALLEY CENTRE PLAZA, BRUNSWICK ST. 4006 Ph. 521005

CANBERRA, 1978

APRIL — ANNUAL PUBLIC AUCTION

Date: Wed 5th April Time: 8 p.m.
Place: Hughes Community Centre,
Woden Valley Model railway material —
railroadians — books. Bring things for
selling and money for buying.

AUGUST — EXHIBITION AND CONTEST

Date: Week-end 5th — 6th August,
11 a.m. — 5 p.m.
Place: Malkara School, Wisdom St.,
Garran.
Top-quality local and interstate layouts,
live steam, trade, ARHS, movies. Free,
open 11-category contest.

*Visitors! Tell us you're coming — make
yourself known.*

SPONSORED BY THE CANBERRA MODEL RAILWAY CLUB

36c large SAE to or phone (STD 062)
36 James St., Curtin, ACT, 2605 81 3489
or 81 5193

MARTINS BOOKSHOP

2 Gordon Grove,
MALVERN. Vic. 3144

WE STOCK A VARIETY OF
INTERESTING AND UNUSUAL
RAILWAY BOOKS.
PRICED FROM AS LITTLE AS
\$2.50

FOR EXAMPLE:

The Malayan Railway	\$2.50
*Rails to the Setting Sun. (Narrow gauge in Australia, Asia etc.)	\$15.75
*Great Railway Bazaar. By train through Asia.	\$9.95

SEND S.A.E. FOR COMPLETE LIST.

H0/00 and N GRANULATED CORK
BALLAST 30 c 2 oz.

H0/00 and N CORK UNDERLAY.
15ft \$3.50

LITESOLD: Lightweight soldering instru-
ment which can be attached to a 12 volt
transformer. It is rated at 12 volts 18 watts,
and costs \$11.60.

GIFFORD PRODUCTIONS
118 ST.KILDA ROAD
ST.KILDA, 3182.

Phone 94 3462.
A/H 94 3462.

THE AUSTRALIAN MODEL RAILWAY ASSOCIATION and FUNTASTIC 4BC

PRESENT

THE MODEL RAILWAY EXHIBITION.

Police and Citizens Youth Club Hall
CAXTON and HALE STs. LANG PARK BRISBANE.

QUEENSLAND LABOR DAY WEEKEND. APRIL 29 to MAY 1 1978

SAT. 9am - 9pm
SUN. 12noon - 7pm
MON. 9am - 7pm

ADMISSION
ADULTS \$1.00
CHILDREN/PENSIONERS. 40c

TRACK for everyone

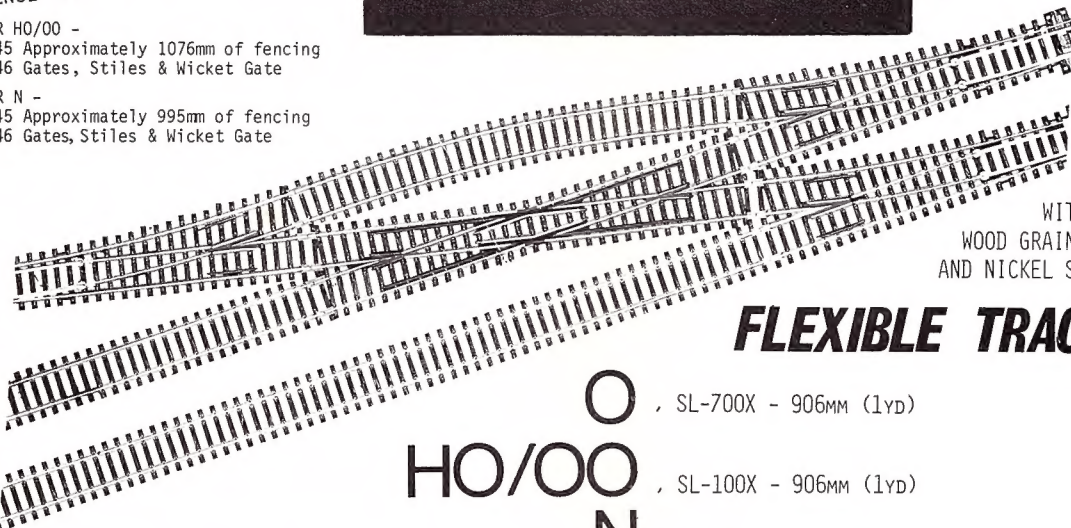
PECO

STREAMLINE

NEW!
FENCING THAT FOLLOWS THE
CONTOURS OF THE LANDSCAPE,
FENCE POSTS THAT DO NOT LEAN

FOR HO/OO -
LK45 Approximately 1076mm of fencing
LK46 Gates, Stiles & Wicket Gate

FOR N -
NB45 Approximately 995mm of fencing
NB46 Gates, Stiles & Wicket Gate



WITH IMITATION
WOOD GRAINED SLEEPERS
AND NICKEL SILVER RAILS

FLEXIBLE TRACK for

O , SL-700X - 906mm (1yd)

HO/OO , SL-100X - 906mm (1yd)

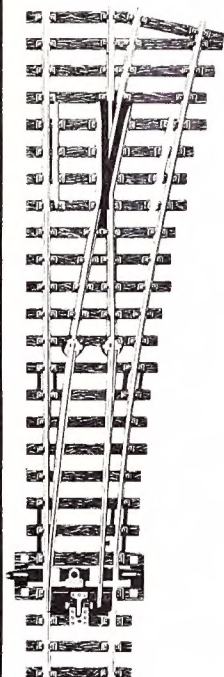
N , SL-300X - 906mm (1yd)

OO9 , SL-400X - 547mm (18")

POINTS

HO/OO

N



HO/OO
SMALL
RADIUS POINT
WITH ELECTROFROG

POINTS WITH INSULFROGS (Dead Frogs)

SL-84X Catch Point - Right Hand
SL-85X Catch Point - Left Hand
SL-86X Curved Point - Right Hand
SL-87X Curved Point - Left Hand
SL-88X 5ft Radius Point - Right Hand
SL-89X 5ft Radius Point - Left Hand
SL-90X Double Slip
SL-91X 2ft Radius Point - Right Hand
SL-92X 2ft Radius Point - Left Hand
SL-93X Short Crossing
SL-94X Long Crossing
SL-95X 3ft Radius Point - Right Hand
SL-96X 3ft Radius Point - Left Hand
SL-97X Short Y Point
SL-98X Long Y Point

ELECTROFROG POINTS (Live Frogs)

SLE-86X Curved Point - Right Hand
SLE-87X Curved Point - Left Hand
SLE-88X 5ft Radius Point - Right Hand
SLE-89X 5ft Radius Point - Left Hand
SLE-91X 2ft Radius Point - Right Hand
SLE-92X 2ft Radius Point - Left Hand
SLE-95X 3ft Radius Point - Right Hand
SLE-96X 3ft Radius Point - Left Hand
SLE-97X Short Y Point
SLE-98X Long Y Point

INTERNATIONAL POINTS (Fine Scale N.M.R.A. Standards)

SL-686 Curved Point - Right Hand
SL-697 Curved Point - Left Hand
SL-688 5ft Radius Point - Right Hand
SL-689 5ft Radius Point - Left Hand
SL-691 2ft Radius Point - Right Hand
SL-692 2ft Radius Point - Left Hand
SL-695 3ft Radius Point - Right Hand
SL-696 3ft Radius Point - Left Hand
SL-697 Short Y Point
SL-698 Long Y Point

POINTS Wood-grained sleepers, nickel silver rails

SL-384X Catch Point - Right Hand
SL-385X Catch Point - Left Hand
SL-386X Curved Point - Right Hand
SL-387X Curved Point - Left Hand
SL-388X 3ft Radius Point - Right Hand
SL-389X 3ft Radius Point - Left Hand
SL-391X Point, 1'6" Radius - Right Hand
SL-392X Point, 1'6" Radius - Left Hand
SL-394X Long Crossing
SL-397X Long Y Point

For both gauges

PL-10 Point Motor
PL-11 Adaptor Bases for PL-10
PL-16 Point Actuating Switch
PL-41 Rail Cleaning Blocks
SL-14 Track Fixing Pins

OTHER LINES FROM PECO

BACKGROUND SHEETS IN TWO SIZES -- HO/OO WONDERFUL WAGON KITS
ROLLING STOCK PARTS AND ACCESSORIES FOR HO/OO AND N GAUGES
HO/OO LINESIDE STRUCTURE KITS -- N STRUCTURE KITS -- N GAUGE
"PETITE PEOPLE" --- N GAUGE READY-TO-ROLL WAGONS --- N GAUGE
WAGON KITS

PLUS O GAUGE TRACK, POINTS AND ACCESSORIES
OO-9 GAUGE TRACK AND ACCESSORIES -- OO-9 LOCO BODY KITS

CATALOGUES:- HO/OO, O GAUGE & OO-9 LINES ----- \$1.50
N GAUGE LINES ----- \$1.50

*from good hobby shops
everywhere*

Casula Hobbies

MARKLIN AND MARKLIN MINI CLUB

PIKO	SUPERQUICK
MEHANOTEHNIKA	RATIO
RIVAROSS!	KIBRI
BACHMANN	FALLER
LIFE-LIKE	AMRI ACCESSORIES
ROUNDHOUSE	KALMBACH PUBLICATIONS
LIMA	PECO PUBLICATIONS
HORNBY	H & M
WRENN	TYCO
PECO TRACK	KADEE PRODUCTS
PECO POINTS	FUN HO MODELS
PECO ACCESSORIES	HELJAN
MINICON TRANSISTORISED CONTROLLERS	AHM
ATHEARN	SHINOHARA
Large STOCKS of Australian Prototype kits by FRIEDMONT, MRC, ProTYPE, ProTYPE Accessories and PMH Bogies.	

A.M.T. Truck and Trailer Kits \$16.95.

RADIO CONTROLLED MODEL AIRCRAFT & ACCESSORIES

Casula Newsagency
 Shop 7,
 Demeyrick Ave and Hume High
 CASULA
 Phone (02) 602 1348

Open 7 days a week. 7am — 6pm
 Thursday 7am — 8.30pm

STEAM RAILWAY RECORDINGS.

Steam Panorama 1st Division	\$4.50
Steam Panorama 2nd Division	\$4.50
Puffing Billy in Stereo.	\$1.80
Power on the Move.	\$6.50
Helper Service.	\$6.50
Sound of Steam Railroading.	\$6.50
The Fading Giant.	\$6.50
Thunder on Blue Ridge.	\$6.50
2nd Pigeon and the Mocking Bird.	\$6.50
<i>ALL Prices include packing and postage.</i>	

AVAILABLE FROM:

**STEAM ACTION
PRODUCTIONS,**
 P.O. Box 75,
 ORMOND, Victoria, 3204.

DISCOUNTS

GENUINE DISCOUNTS

Peco N/S track
 Rail joiners (insulated/non insulated.)
 Track cleaning rubbers.
 Airfix and Mainline (wagons, vans and tankers.)
 Ratio fencing and Station gates and telegraph poles.
 Tiny Signs, from old style road signs to railway and etched brass road signs.

MANY MORE TO CHOOSE FROM.

SEND S.A.E. for full listings.

MAIL RAIL (reg. in Q'ld.)
 P.O. Box 58 Mt. Gravatt
 4122.

THE SIGNAL BOX

129 BELL STREET, COBURG. 3058
 (03) 35 8519

MRC ROLLING STOCK KITS
BJ MODELS STRUCTURES
RAIL TRANSPORT MUSEUM TRANSFERS
LINING TAPE 1/64" to 1/8"
MEHANOTEHNIKA LOCOS STEAM AND DIESEL
 (Including Alco 628 Hamersley Iron and Mt Newman diesels)
ATHEARN, LIMA, JOUEF, ROUNDHOUSE.
KADEE, HELJAN, LIFE-LIKE KITS.
ATLAS LOCOS, SUYDAM KITS.

MAIL ORDER WELCOME



N

1:160 9mm

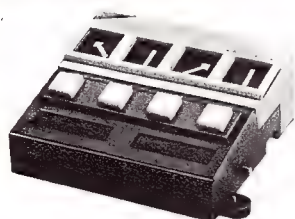
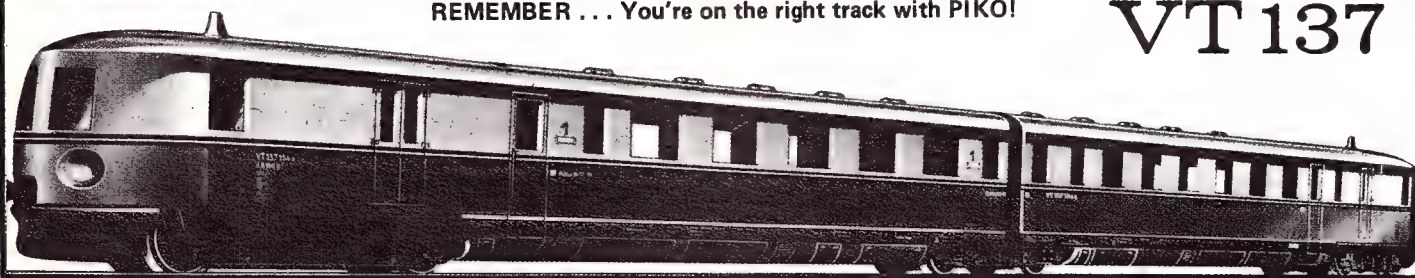
PIKO MODELLBAHN

H0

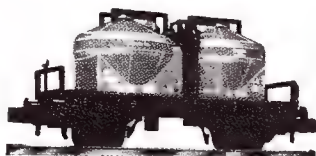
1:87 16.5mm

REMEMBER . . . You're on the right track with PIKO!

VT 137



399/51 switch block with acknowledgement



5/4407 Model of the DR cement truck.



5/051 PIKO switch relay — double coil drive with isolating section and reply contacts.

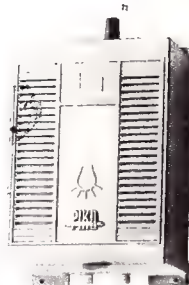
The model railway running will be still more realistic — PIKO's Lux Constant keeps the lights burning in your trains!

5/7000 Light-fitting generator L 1 „Lux Constant“ enables:

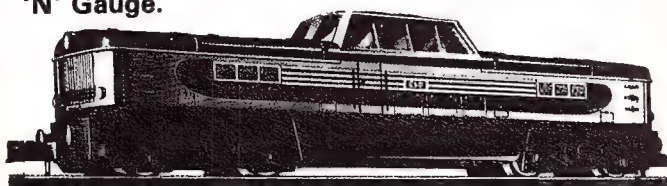
Train lighting independent of the operating voltage! Suitable for model railways of all gauges, also for car-racing tracks. Input voltage: 16 V. A.C., current input 1,5 A with maximum charge, output voltage: approx. 15 V. — up to 30 mini-lamps of 16 V. and 0,05 A can be connected!

5/7001 Choke-coil L 11 — to be included into the operating current supply line in order to avoid a short circuit of the lighting-voltage through the transformer.

5/7002 Coupling condenser for transmitting the lighting-voltage over all the isolating points.



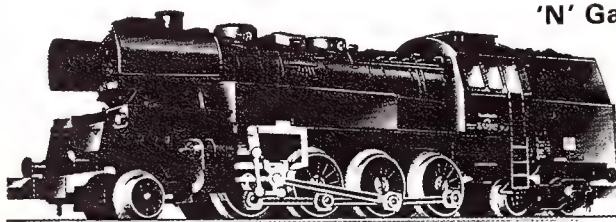
'N' Gauge.



5/4106 Model of the Diesel engine T 449 of CSD

Axle arrangement B'B', length: 110 mms. Exact make of all details, colours and inscriptions. Both bogies are driven. Great tractive power by help of lead ballast.

'N' Gauge.



5/4103 Model of the passenger train tender engine BR 65 of the DR

Axle arrangement 1'D2', length: 110 mms. Exact make of all details, colours and inscriptions. All pairs of wheels are driven. Great tractive power by help of lead ballast.

AVAILABLE AT THE FOLLOWING STOCKISTS:—

QUEENSLAND: Valley Toyworld — Taintasia, Miami Beach — Cannon Hill Toyworld — Caloundra Toyworld.

SOUTH AUST.: Bridglunds Hobbies — Kids Korner & Toyworld — Model Centre — H. & E.M. Simon & Son — Tilesia Pty Ltd.

VICTORIA: Ballarat Toys & Hobbies — Gunners P/L, Camperdown — Geelong Toys & Hobbies — Carsons Toyworld, Morwell — V.R.

& W.A. Packenahm, Chelsea Hts — Tinyland, Malvern — Traralgon Toyworld.

TASMANIA: The Model Shop, Hobart.

N.S.W.: Alce's Hobby Shop, Merrylands — Casula Hobbies — Green Hills Camera Centre, East Maitland — Keith Hudsons Modellers World — Kid's Things, Fairy Meadow — Railmail, P.O. Box 152, Wellington — Searle's, Chatswood — Toyman Imports, Yennora — Hoopers Toys, Matraville — Model railway Centre, Miranda — Micro Models, Hornsby — Mansfield Hobbies, Waitara.

Distributed in Australia by:

B.H. WINN PTY. LTD.

Trade and general enquiries only.

104-108 MOUNT STREET, NORTH SYDNEY. 2010. Phone (02) 929 7333

EXPORTER: DEMUSA D.D.R. — 108 BERLIN, CHARLOTTENSTRASSI. 46.

VICTORIA

B.H. WINN PTY. LTD.
79 Market Street,
South Melb. 3205
Phone. 699 3644

STH. AUST.

E.B. & M.S. MACKENZIE,
155 Pirie Street,
Adelaide. 5000
Phone: 223 6279

WEST. AUST.

Burrow Trading Co.,
975 Hay Street,
Perth.
Phone: 321 2422

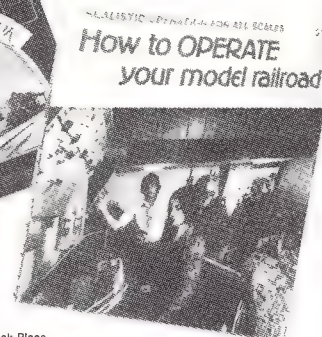
QUEENSLAND

J & M Miller,
Andrew House,
Cnr. Wickham Tce. & Wharf St.,
Brisbane.
Phone: 221 3854

Some recent BOOKS

KALMBACH BOOKS

- 12028 "HOW TO OPERATE YOUR MODEL RAILROAD" -- -- \$15.95
Packed with hundreds of ideas on how to add variety and interest to your model railroad operation
- 12029 "WESTINGHOUSE BRAKE STORY" -- -- -- \$ 3.00
Full story of the development of the brake with diagrams and photos for the modeller
- 12030 "POPULAR MODEL RAILROADS YOU CAN BUILD" -- \$ 7.00
A number of America's most popular model railroads and how you can build them
- 12031 "RAILROAD STATION PLANBOOK" -- -- -- \$ 4.75
Photos, plans, drawings and information on 28 distinctive North American stations
- 12032 "1928 HANDY RAILROAD ATLAS OF THE U.S.A." \$ 6.00
Re-print of the 1928 American Railroad Atlas

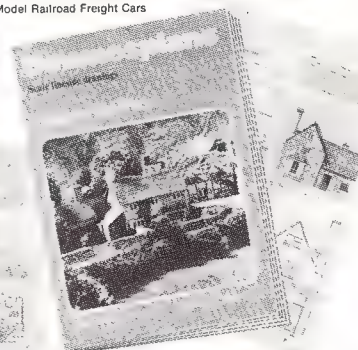
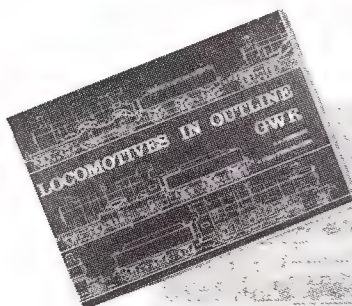


N Scale Model Railroad Track Plans
Track Planning for Realistic Operation
How to Wire Your Model Railroad
Track Plans for Sectional Track
Scenery for Model Railroads
Railroads You Can Model
Practical Guide to Model Railroad
Bridges & Buildings for Model Railroad
Easy-to-Build Model Railroad Structures
Practical Electronic Projects for Model Railroads
N Scale Primer • Small Railroads You Can Build
764 Helpful Hints for Model Railroads • All About Signals
HO Primer • Traction Guidebook for Model Railroads
101 Track Plans for Model Railroads • Railroad Station Planbook
HO Railroad That Grows • Easy-to-Build Model Railroad Freight Cars

Two NEW Peco Publications

LOCOMOTIVES IN OUTLINE - GWR C. J. Freezer
77 4mm scale drawings covering most popular GWR locomotives \$5.00

DOWNSPLANS Country Buildings - Allan Downes
28 pages of plans and photos with detailed information on construction \$3.00



RATIO

PLASTIC MODELS HO/OO

LOCOMOTIVE KIT

5778 L.M.S. (ex-Midland) Johnson 0-4-0 with tender \$37.50

L.M.S.(MIDLAND) COACHES

LOW ROOF 48ft SUBURBAN 6.25
5710 All Third, 8 compartments
5711 All First, 7 compartments
5713 Brake Third, 6 compartments
5714 Brake Third, 4 compartments

48ft CLERESTORY 6.75

5720 All Third, 6 comp., Lav., luggage
5722 Composite, 3 first, 3 third, lav.
5723 Brake Third, 4 comp., lav., guard
Above coaches ideal for use with 5778

G.W.R. 4-WHEEL COACHES 3.50

5610 All Third
5612 Composite
5613 Brake Composite

GOODS WAGONS

5062 G.W.R. Bogie Bolster Wagon 2.25
5063 G.W.R. "Iron Mink" 2.00
5064 G.W.R. 5-plank Open Wagon 2.00
5065 G.W.R. 12 ton Box Van 2.95
5066 G.W.R. Motor Car Van "Mogo" . . . 2.95
5069 G.W.R. "Toad" Brake Van 3.25
5071 L.M.S. Bogie Ore Wagon (ex-Cal) . . 2.25
5072 L.M.S. 12-ton Box Van 2.25
5073 L.M.S. 3-plank Open Wagon 2.25
5091 S.R. 12-ton Box Van 2.25

SIGNAL KITS

LQ/60 G.W.R. lower quad. sq. posts . . 2.25
LQ/61 G.W.R. lower quad. tube posts . . 1.00
UQ/70 L.M.S. upper quad. tube posts . . 2.75
LQ/71 L.N.W.R. lower quad. sq. posts . . 2.75
UQ/80 L.N.E.R. upper quad. Lattice posts . . 2.75
PT/50 Pratt Truss Signal Gantry 1.75

FENCING

F/ML1 Lineside Fencing, 4-bar - 850mm Black or white85
F/MS2 Station Fencing, diagonal paling (Midland) - 850mm (white)85
F/WS3 Station Fencing, vertical picket (GWR) - 765mm approx (white) . . .85
F/WS4 Station Fencing, vertical picket -765mm with gates & ramps . . . 1.75

TELEPHONE POLES

TP/1 Telephone Poles in packet of 16 . .85

WHEELS - 8 wheels on 4 axles

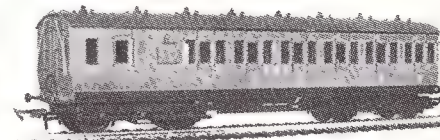
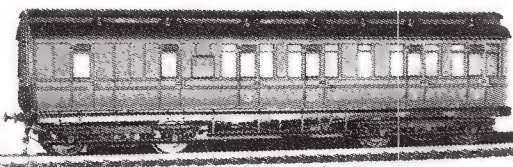
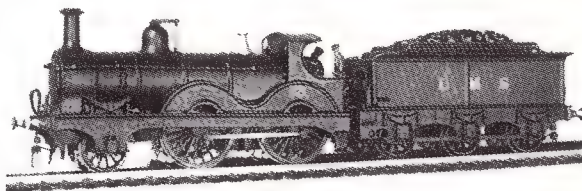
W/001 12mm spoked40
W/002 12mm disc40
W/003 14mm disc (Manseil)40
W/004 14mm spoked (tender)40

BOGIE & UNDERFRAME KITS

DF-1 Diamond Frame Freight Bogies with Triang type couplers pr 1.00
PL-2 G.W.R. Plate Bogie with Triang type couplers pr 1.00
BM-3 Midland style 10' Passenger Bogie w/Triang type couplers pr 1.25
B-LNW4 8ft Bogies with couplers pr 1.50
5050 Wagon U/frame 10ft w/base . . . 1.00
5060 GWR Wagon U/frame 10ft w/base . . 1.25
4360 Coach u/frame as for 5610/5612 . . 1.00
4361 Coach u/frame as 5613 1.00
5750 Coach U/frame for all LMS coaches 2.50

COACH SEAT MOULDINGS

CSM/2 Coach Seat Moulding - enough for 8 compartments . . .70



from good hobby shops everywhere

TO ALL RETAILERS:-
Prices shown in this advertisement are recommended prices only and there is no obligation to comply with the recommendations.

FOR TRADE AND GENERAL SUPPLIES:-

AUSTRALIAN MODEL CRAFT CO., 577 Dean St., Albury, N.S.W. 2640

AMRM

March/April 1978
Issue 89. Vol. 8 No. 8
AT ISSN 0045-009X

The official Journal of SCMRA in Australia.
Incorporating the Yardmaster, bulletin of
The Sydney Model Railway Society.

Published bi-monthly by S.C.R. Publications
of P.O. Box 235, Matraville, NSW 2036 for
the Southern Cross Model Railway
Association. All rights reserved and all
editorial matter copyright. Registered for
posting as a publication - Category B.
Printed by Publicity Press Ltd, of 29-31
Meagher St, Chippendale, NSW 2008.
All compilation, editorial and distribution
work is carried out by voluntary labour on a
non profit basis.

Editor Allan Brown
Managing Editor. Bob Gallagher
Associate Editor. Bill Starks
Editor (Reviews) Graham Ahern
Assistant Editors (NSW) Alan Templeman
Stuart Liversey, Paul Rogers
Assistant Editors (Vic.) Ian Weickhardt
Peter Gibbs
Assistant Editor (S.A.) Phil Curnow
Assistant Editor (Qld) Max Chaseling
Staff Artist (Illustrations) Ian Thorpe
Photographer Graham Ball
Research Bob Merchant, Phil Collins
Assistants John Bevan
Arthur Robinson, Bill Kerr,
Phil Jeffrey, Barry Eadie,
Peter Vincent, Ross Hurley
Draughtsmen Roger Johnson
Ray Love, Ian Stevens,
Ron Wigglesworth, Adrian Compton
David Wearne, Howard Armstrong
Tony Parnell, David Howarth
Back Issues Manager John Casey
Subscription Manager. Ted Cole
Distribution Manager. Trevor Moore

DISTRIBUTION: Subscriptions, SCMRA
and SMRS members; hobbyshops and
Associations by SCR Publications;
newsagencies and bookstalls by Gordon and
Gotch (A'asia) Ltd.

ADVERTISING: Details available from
S.C.R. Publications, P.O. Box 235,
Matraville, NSW 2036. Phone (02) 661-4046
(evenings only).

CONTRIBUTIONS in the form of articles,
photographs, club notes, hints, letters to the
Editor, drawings or trade press releases are
welcome for publication in this magazine.
All items received will be acknowledged
upon receipt. Please pack photographs
between stout cardboard before posting.
Indicate whether photographs are to be
returned, and if trimming is forbidden.

SUBSCRIPTIONS: Rate (by mail); Australia
\$6.70 per year (6 issues); overseas \$8.70
per year. A limit of one year. All monies
payable to S.C.R. Publications at Matraville,
NSW. Subscription starts with the first
issue after receipt of money.

ADVERTISING DEADLINES: For all copy
is as follows:-
May/June 1978 21.4.78
July/August 1978. 23.6.78
September/October 1978 25.8.78
November/December 1978 27.10.78
January/February 1979 15.12.78

A SWISS THEME
YARDMASTER
A VERSATILE CAB CONTROL SYSTEM
S.A.R. 45 Ton COAL HANDLING PLANT . . 1
STEAM BEHIND THE BRAKEVAN
ECONOMIC CONTROLLER
CONTAINER WAGONS OF N.S.W.
A GM12 CONVERSION
NAMED LOCOMOTIVES of the A.N.R.
AUTOMATIC TRAIN OPERATION
PROTOTYPE PLAN: C.R./A.N.R. 'GM12' Diesel Electric Locomotive

Lillian Taylor 13
Wayne Lang 15
Phil Curnow 16
Phil Curnow 22
Derek Thomas 23
Bob Gallagher and Paul Rogers 24
Rod Parry 27
Paul Rogers 28
Peter Betts 29

AMRM NEWS
WATER TANKS OF THE V.R.
NO JUICE
BUILD A V.R. WATER TANK
NSWR
PROTOTYPE PLAN: NSWPTC 'WHX' Bogie Wheat Hopper

Roger Johnson and Bob Gallagher 30
Ron Wigglesworth and Ian Weickhardt 34
Dennis Toohey 35
Charlie Huggard 37
Frank Shennen 38

RECOLLECTIONS
MAILBAG
OIL TANKS of the NSWPTC
REVIEWS
1977 AUTHORS AWARDS
BOOKS

Paul Rogers and Hugh Campbell 41
Ian Weickhardt 43
Bob Gallagher 44
John Bevan 47

COMMENT

There are times when some readers seem to
get a complete misconception as to what
AMRM and other magazines publish, for they
(the readers) seem to take an attitude that has
been expressed in written form, personally.
The basis of any magazine is the exchange of
ideas and, as such, attitudes. If the editor only
receives, as contributions, one side of the
debate, he somehow has to find someone
willing to present the other view, so that
readers can form their own opinion. In some
instances the opposing argument is presented
by an assistant editor who does not hold the
view he expresses, else the other side of the
argument is not presented. Who is to blame?
Don't point the finger at the editor for his
duty is to prepare contributed material for
publication. The blame lays at the feet of the
readers.

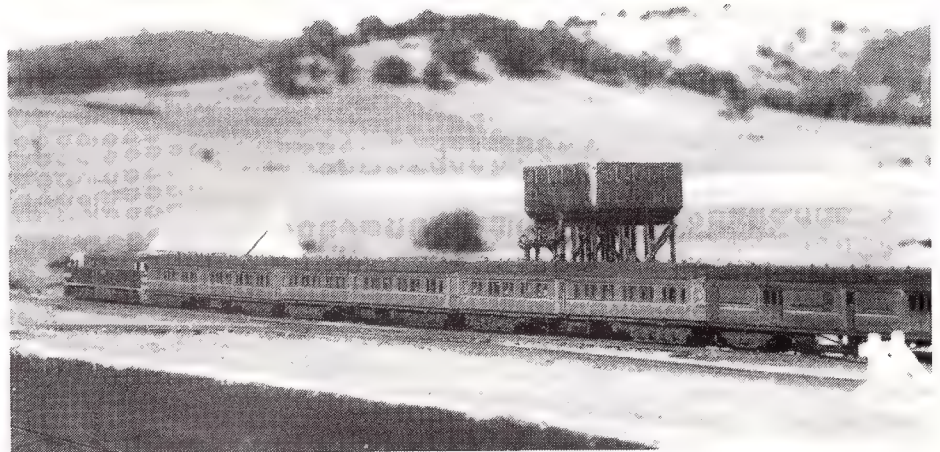
Some readers have a tendency to misinter-
pret the intentions of an author and are per-
sonally offended at the slant of an article.
The offended party has a course of redress,
by contributing another view, but in most
cases he does not bother. Some readers can,
and do, disagree with 50% of a specified article,
for there are many ways of attaining an objec-
tive and the fact that one reader disagrees with
an author's view-point does not make either
party incorrect. Regrettably the views and

methods discussed and debated in AMRM are
only from a small cross-section of the Austral-
ian modelling public and the contributors to
MAILBAG form an even smaller cross-section.
Unfortunately this, then, narrows the scope
for any discussion.

Readers should always bear in mind that
authors and AMRM staff are really only modellers
who have a commitment to produce a
magazine that in turn can assist the growth of
the hobby in Australia. Each person has his
own view-point on a subject; in many cases it
is similar to that held by others on the staff,
but that does not indicate that their word is
law. Each reader should carefully consider all
views expressed and form his own conclusion
and, if it differs from that in print, send in a
contribution so that all can benefit.

Readers who feel that magazines are avoid-
ing certain aspects or subjects should endeavour
to correct the omission either by letter or
article. There is the chance that the editor
and his staff may have completely overlooked
the point. If the silent majority continue to
grow in number, they will only be able to read
of the views and exploits of those few who are
prepared to write. A magazine can only be as
good as its editor and its contributions. AMRM's
editor has a competent team assisting him so he
only needs the material and data to work from.
If readers want to read an interesting magazine
they must be prepared to contribute an inter-
esting point. One only receives as good as he
gives.

Bob Gallagher.



The Albury Mail pauses at a small station on the main Southern Line. The 44 Class loco is of brass construction on Triang power bogies. The carriages and guards van are made from North Eastern wood and Plastibond castings from silicone rubber moulds. Photo and models by John Huxtable.

ON THE COVER: This issue a feature of AMRM is a coverage of the Commonwealth Railways (now A.N.R.) 'GM' class locomotives. The cover photo features GM 47 and GM 43 at the head of the Trans at Port Pirie station. Roger Billett supplied the photograph.



McBEE'S HOBBY CENTRE

"THE"

Model Railway — Mail Order Specialists

PHONE — (03) 478 0038

MERIT 00/H0 ACCESSORIES

Passengers Standing Set A	\$1.95
Passengers Standing Set B	\$1.95
Passengers Seated	\$1.95
Public Services Personnel	\$2.50
Station Staff	\$1.95
Porters	\$1.95
Loco Crew	\$1.60
Cable Laying Party	\$1.80
Hikers	\$2.50
Scouts and Trek Cart	\$2.50
Coalmen and Scales	\$1.15
Ticket Collector and Box	\$1.95
Telephone Kiosk and Caller	\$1.95
Cable Drums	\$1.35
Kissing Gates	\$1.15
Parcels	\$1.60
Sacks and Barrels	\$1.60
Cycles and Stand	\$1.60
Horses and Ponies	\$1.15
Sheep and Lambs	\$1.15
Cows	\$1.15
Pigs and Trough	\$1.15
Bus Stop and Shelter	\$1.60
Fir Trees	\$2.10

PECO H0 "SETRACK"

The geometry of PECO Setrack makes it suitable as a direct substitute for elements in the Hornby range whilst having the advantage of Nickle Silver rail. It is compatible with PECO Streamline and Electrofrog points. Naturally all the PECO ranges of track are available from McBEES.

ST200 Standard Straight	lgth. \$.80
ST201 Double Straight	lgth. \$1.15
ST202 Short Straight	lgth. \$.60
ST205 Isolating track w/switch	lgth. \$2.20
ST210 Level Crossing w/gates	ea. \$3.10
ST211 Level Crossing w/barriers	ea. \$3.10
ST220 No. 1 Curve Standard	lgth. \$.80
ST221 No. 1 Curve Double	lgth. \$1.05
ST222 No. 1 Curve Half	lgth. \$.65
ST225 No. 2 Curve Standard	lgth. \$.80
ST226 No. 2 Curve Double	lgth. \$1.15
SY227 No. 2 Curve Half	lgth. \$.65
ST240 Point R/H	ea. \$4.60
ST241 Point L/H	ea. \$4.60
ST250 Crossing	ea. \$4.15
ST255 Underlay R/H	ea. \$.80
ST256 Underlay L/H	ea. \$.80
ST270 Buffer Stop	ea. \$.80

FLOQUIL PAINTS

We endeavour to keep full stocks of this fine range of paints at all times. Two new colours have been released and should be in stock when this appears. They are Railbox Yellow and Conrail Blue. All Floquil 1oz. bottles of paint are priced at \$1.25. (Up to \$1.60 elsewhere in Melbourne). We also have Floquils solvent, Dio-Sol, in a number of sizes.

Dio-Sol 8oz. can	\$2.45
Dio-Sol 16oz. can	\$3.45
FLOQUILS "Painting Miniatures" booklet is still available for	\$2.00

POSTAGE RATES

Under \$10.00 add 75c	
\$10.00 — \$30.00 add	\$1.50
Over \$30.00 free except; Airmail add extra	
\$2.00. Overseas add extra \$2.00.	

KADEE 0 GAUGE

No. 805 Couplers pair	\$2.50
No. 810 Electro-magnetic Uncoupler	\$10.00
No. 811 Perm. magnet Uncoupler	\$2.50
No. 845 Coiled Knuckle Springs doz.	\$1.35
No. 850 Coiled Centering Springs doz.	\$1.35

KADEE H0 COUPLERS

No. 4 All metal coupler 2 pair	\$2.20
No. 5 Universal coupler 2 pair	\$2.20
No. 6 Long shank coupler 2 pair	\$2.50
No. 7 Underset, long coupler 2 pair	\$2.50
No. 8 Medium length coupler 2 pair	\$2.50
No. 9 As for No. 5, but bogie mounted	2 pair \$2.50
No. 711 3/4 size for "old time" equipment	2 pair \$2.50
No. 13 Coupler Test Kit	\$9.50
No. 16 Is the No. 6 coupler with No. 7 draft gear	2 pair \$2.50

(No. 16 is for use with vehicles with buffers)
We offer a 10% DISCOUNT on lots of 10 or more packets of H0 couplers.

KADEE H0 UNCOUPLERS

No. 307 Electro-magnetic	ea. \$7.25
No. 308 Under track perm. mag.	ea. \$2.15
No. 334 Uncoupler Gluing Jig	ea. \$2.15

NOTE: Price quoted for the gluing jib in Jan./Feb. AMRM Review section was \$2.50. Our price is \$2.15 — an indication of the savings to be made by buying Kadее from McBEES.

KADEE H0 BOGIES

No. 500 Bettendorf	pair \$3.15
No. 502 Bettendorf, with couplers	pair \$4.20
No. 509 Andrews	pair \$3.15
No. 520 33 inch freight wheels 12 axles	\$3.95

KADEE H0 DETAILING ITEMS

No. 437 Plastic Cattle Guards	ea. \$1.25
No. 440 18 inch metal brake wheels (6)	\$1.15

KADEE H0n3

No. 708 Electro-magnetic Uncoupler	\$7.35
No. 709 Perm. Magnet Uncoupler	pair \$3.00
No. 714 H0n3 Coupler	2 pair \$2.50

KADEE N GAUGE

No. 1023 Coupler Assembled	2 pair \$3.35
No. 1029 Small parts packet, includes; 00-90 screws, bolster pins, bushings and washers	\$3.35
No. 1055 N Standards Gauge	\$4.60
No. 1309 Electro-magnetic Uncoupler	\$8.25
No. 1310 Perm. magnet Uncoupler	\$2.50
No. 1007 Wheels, ribbed back, tapered axles	12 pair \$3.00
Locomotive Coupler Conversion Kits.	
No. 1048 for 2-8-8-2 mallet	\$4.60
No. 1101 for Con-cor PA1	\$5.20
No. 1102 for Con-cor PB1	\$5.20
No. 1103 for Minitrix F9A	\$4.20
No. 1104 for Minitrix U28	\$4.25
No. 1106 for Minitrix Fairbanks Morse	\$5.20
No. 1116 for Bachmann GP40	\$5.00

There are many other Kadее N gauge conversions available. Kadее have also developed a system to magnetically uncouple Rapido type couplers. Full details are included in their N gauge catalogue. Price \$1.95 plus postage.

TRADING HOURS

Mon. — Thur	10.00am — 6.00 pm
Fri.	10.00am — 9.00 pm
Sat.	9.00am — 1.00 pm

FOR THE SCRATCH BUILDER

L.A.R. DRILLS

12 Volt Drill with 2 spare chucks	\$18.95
Set 30 Super Deluxe home workshop in carrying case. Contains 12 volt drill, drill stand and flexible drive. Plus assortment of 30 drill access.	\$67.50
Flexible Drive Shaft	\$10.50
Drill Stand	\$15.95

X-ACTO

Mitre Box with saw blade and hand	
Mitre Box with saw blade and handle	\$8.50
No. 82 Knife Chest contains 3 knives and 9 assort. blades in case	\$9.40
Mini-VacuVise	\$7.50

PAINT BRUSHES

Very fine sable brushes for lining etc.	
"0" Size	ea. \$.78c
"00" Size	ea. \$.85

WALTHERS

Goo adhesive	tube \$1.15
Solvaset decal softener	bottle \$2.10
DDV flat finish	bottle \$2.10

DYNA MODELS METAL KITS H0

1908 Buick	painted \$5.95
	unpainted \$3.25
1916 Twin Six Packard	painted \$5.95
	unpainted \$3.25
1914 Stutz Bearcat	painted \$5.95
	unpainted \$3.25
1911 Maxwell	painted \$5.95
	unpainted \$3.25

Next release in this range from DYNA is a Stanley Steamer. Due early April.

KALMBACH BOOKS

NEW! How To Operate Your Model Railroad, by Bruce A. Chubb	\$13.95
The 2nd Diesel Spotters Guide	\$7.75
H0 Primer	\$4.00
Track Plans for Sectional Track	\$2.50
101 Track Plans	\$3.50
Plans for Small Railroads	\$2.50
How to Wire Model Railroads	\$4.00
Scenery for Model Railroads	\$4.50
H0 Railway That Grows	\$3.50
Practical Electronic Projects	\$4.00
Track Plans for Realistic Operation	\$4.00
Bridges and Buildings	\$3.50
746 Helpful Hints	\$3.50
Practical Guide to Model Railroads	\$3.50
N Scale Primer	\$4.00
N Scale Track Plans	\$3.00
Traction Guide Book	\$4.00
All About Signals	\$2.50
Railroads You Can Model	\$4.00
Building Plastic Models	\$4.00
Railroad Station Planbook	\$4.50

A.R.H.S.

Victorian Steam	\$6.95
Australian Diesel Loco. pocket book	\$3.90
Steam In Australia	\$7.90
V.R. Diesel Pictorial	\$3.75

CARSTENS

Electrical Handbook — Vol. 1	\$3.50
Electrical Handbook — Vol. 2	\$3.50
Railroad Atlas of the USA	\$4.50

BACKMANN H0

By the time this magazine appears we should have another shipment of BACHMANN'S 4-8-4 in Santa Fe at around the \$52.00 mark. The N scale version is available at the time this ad. is being prepared for \$39.95.

Our shop is located at

535 PLENTY RD.
EAST PRESTON.
PLEASE all Mail Orders to
P.O. Box 144 COBURG. 3058

THE MAIL ORDER SPECIALISTS —

McBEE'S, P.O. BOX 144, COBURG, VICTORIA, 3058



PO Box 144 is registered at 535 Plenty Road, East Preston. Items above are a selection only. Any other enquiries, please write. Licensed secondhand dealer



A SWISS THEME

Mother and son Lillian and Maurice Taylor combine their talents to produce one of the finest N scale exhibition layouts around.

Playing trains at your age! What a common remark from friend, foe and relatives alike. You see I am forty-four years of age — left on my own with a normal healthy teenage son, and we have only a pension as income.

How does a person like myself become "hooked" on model trains? Well, I guess I

have all the basic ingredients:-

1. A dozen or so youngsters (my son included) all members of the Lower Blue Mountains Model Railway Club, whose ages range from 10 to 16 years.
2. A normal parental desire to help the children with their activities.

3. And time — plenty of time!

The net result — a model railway for mum (just to be with it of course).

Well, that's how it all started, anyway. Firstly we had to decide on a gauge. As my son already had an H0 layout, which was taking up a lot of room, we decided upon "N" gauge.





There were two reinforced plywood boards 8' x 2' in the garage which we used as baseboards.

The country to model was easy to decide upon. An article had just appeared in the *Miniature and Model Railway Magazine* about the Swiss Transport Museum's "Gotthard Model". What a beautiful country, with magnificent viaducts, bridges and tunnels.

Now the building. The work begins 20th October, 1975.

Basic land form.

We used large blocks of polystyrene foam about 3' x 2' x 6' deep. The boys found ours at the local tip, but it can be purchased commercially. As we decided upon high ground either end with a river gorge across the middle a block was glued to the baseboard at each end with Aquadhere and allowed to dry. About 24 hours was enough. Then another block was glued on top of these, weights sat on top and allowed to thoroughly dry.

Carving the foam.

For this we used the kitchen carving knife and literally carved the tunnels out of the foam, shaping the mountains and valleys as we went. Firstly we made the mountains then the railway. The result was quite realistic and amazingly simple.

The rock texture is obtained by breaking the pieces off the foam rather than by cutting with a knife.

All the tunnels are accessible at the back of the layout through flaps cut in the backdrop and hinged.

Grass, roads, etc.

After the foam is formed into the desired shape it is given a rather heavy coat of ordinary plastic house paint of the desired colour. This can be bought in very small amounts and the colours mix very easily. The scatter material is sprinkled onto the wet paint, pressed gently and allowed to dry. The excess material can then be brushed off with a soft brush. We found it best to sieve the scatter material for the N gauge but this would not be necessary for HO. The rocks are painted with appropriate rock colours.

The river bed.

The basic shape for the river was broken or plucked out of the foam with the fingers leaving the ply baseboard as the river bed itself and the rough edges as the banks. Small pieces of foam were glued in the river bed for small rocks and painted. We then painted the river bed dark blue-grey in the areas meant to

look deep and getting lighter towards the edges to represent shallow areas. This shading gives the effect of depth, although it is the same all the way.

The wax river.

For the water we used candle wax (aqua colour) which we obtained at the local craft shop.

Firstly, all gaps between the foam and the ply base must be sealed along the river banks. For this we used glazing putty. A small piece of ply must be tacked at the ends to seal in the wax.

The wax is melted over a double saucepan and allowed to become quite warm (not boiling). Slightly tip the base in the direction you wish the river to flow. Pour the wax quickly but carefully from the highest end tipping the board if necessary to allow the wax to flow to edges and around corners. Level the board and blow very gently upon the surface to form ripples. Pouring and working the wax must be done very quickly before it starts to set.

Trees.

For the smaller trees we used lichen with toothpicks as the main trunks. These can be stuck into the foam.

The pine trees are the small plastic fronds off a commercial Christmas tree. We smeared a coating of Aquadhere over the "trees" then sprinkled them thoroughly with dark green scatter material and allowed them to dry. They were then glued into small holes in the foam surface.

Buildings.

All the buildings on the layout were from commercial kits, with the minimum of alteration and painting. They are mainly Kibri, with some Pola and Faller.

Bridges and viaducts.

The large viaduct was made from Pola kits, with the piers from plasticard stonewalling. The other bridges were Faller curved and straight viaduct kits.

Track laying.

The track is set directly onto the foam, pinning with galvanised gyprock nails as these hold and do not pull out easily. We then glued the track with drops of Aquadhere every couple of inches. We found this method very good and when the glue is dry the nails can be completely removed.

The backdrop.

This we fixed to each board. They are three-ply on 1" x 1" frames. Access flaps were cut and hinged so that every tunnel is completely accessible from the back of the layout for ease of cleaning, etc.

The painting on the backdrop is done with the same plastic house paint as the rest of the layout. We have tried to capture the atmosphere of the magnificent Alps to add authenticity to the rest of the layout.

Our aim.

To incorporate as many examples as possible of the engineering feats of seemingly insurmountable magnitude accomplished by this small country when building this amazing railway system.

We have set the time as the early 1900's, before the federation of the Swiss Railways. Also, we have endeavoured to keep our engines and rolling stock as near as possible to what could have been run on this railway at the time.

Postscript

Since writing the article on the layout it has been exhibited at numerous exhibitions, being awarded the most popular exhibit at the Warrimoo exhibition in both 1976 and 1977. A 4ft by 3ft extension has been added which features a locomotive depot. The layout is now for sale, and any enquiries can be made direct to Lilian Taylor on (047) 39 1474.



BULLETIN OF THE SYDNEY MODEL RAILWAY SOCIETY

Work on the club layout has been geared only to maintenance lately and news is at a minimum, so I have included an article by a member which should be of interest to others.

First off, I can now report that all terminals on the layout are in full operation and we now have two additional timetables to be tried out. Goods control board has been replaced completely and the club has bought typist chairs for all positions, thereby allowing more room and more comfort.

The South Coast Railways started about 1947 as an "O" gauge three-rail outdoor layout. Later, due to weather, a 15 x 25 building was erected to house the S.C.R. which finished up with a total of 700 ft of track. After several years of operation the S.C.R. went into the hands of the receivers, with all stock being sold, except models of local prototype. A year went by before the S.C.R. started to rebuild, only this time in HO scale using

Continued on page 15

A VERSATILE CAB CONTROL SYSTEM

by Wayne Lang.

There must be many control methods in use on model layouts. This article is presenting one way in which a layout can be wired for maximum efficiency yet be simple to implement and, above all, be expandable without losing any simplicity or efficiency. This article uses the 'common return wiring' principle.

Objectives.

This list of objectives will give you some idea of what this system can achieve for you.

- Dual mainline cabs.
- Each yard or major shunting siding to have its own cab.
- Whole layout be able to be operated by one person.
- Layout to cater for as many operators as possible and still retain objective (c).
- Additional yard cabs to be added 'with a minimum of fuss'.

Description.

The description of this system will be done with reference to the diagrams. It will start off with a basic two cab system and lead into the basis of this article.

Figure 1.

Illustrated are three mainline blocks, their associated block switches and two controllers. The common return is shown linking the two controllers. If the whole mainline is wired like this then two operators may work the layout

at the same time, as long as there are sufficient passing tracks for the layout's operational requirements.

Figure 2.

This illustration is the same as fig. 1 with the addition of a three block yard. Wiring the yards the same as the mainline allows both mainline operators to go into any yard but it has, in turn, restricted the whole layout to two operators.

Figure 3.

This diagram shows the same mainline and yard blocks as in fig. 2. The difference is that a third cab has been added. In the diagram you can see that the mainline blocks are wired and controlled as before. The yard blocks have been slightly altered. They still have a two position block switch but one of the positions is dedicated to the new cab (c) and the other position is dedicated to one of the mainline cabs (A or B). To select which of the mainline cabs is to have access to the yard blocks we have introduced another 2 or 3 position switch

CAB CONTROL

Cab Control is a model railway control system where as a train progresses around the layout the control of the train remains with one controller, which is switched to the appropriate blocks.

which I have labelled 'Yard Selector Switch' (YSS). The YSS can now select either 'A' or 'B' mainline cabs to enter the yard. If the yard is big enough, the cab selected by the YSS can operate in the yard at the same time as (C), although not in the same block. This is an example of the disadvantage of isolating single ended sidings by using points.

Figure 4 (example)

A train travelling in the direction indicated is to enter the yard and stop in block 14. The yard loco is to break up the train from the ladder end. (a dead section of track at the end of 14 will prevent it moving when the yard loco enters block 14.) The yard loco is stationary in block 13. Blocks 1 and 2 are assigned to 'A'. The yard selector switch is set to 'A'. Blocks 12 and 14 are now assigned to 'A' by putting them in the A/B position. The train can now run through blocks 1, 2, 12 and into 14 and stop. The yard loco 'C' can now assign blocks 12 and 14 to itself and proceed to break up the train. Another possibility is that 'C' and 'A' can work the yard and 'B' can run through the mainline by setting blocks 1, 2 and 3 to 'B'.

Summary

If the system as per fig. 3 is used you will still wire small sidings as per fig. 2. However, if you decide later to increase this siding large enough to allow two locos to move simultaneously, then you can add another yard cab 'D', add a yard selector switch, change 2 or 3 wires and you will now have two yards as per fig. 3. The layout can now accommodate 1-4 operators, depending on how many are present.

Any control system that is devised has advantages and disadvantages when compared to another system. The system mentioned here will not appeal to everyone, indeed some layouts will have better ideas than are presented here but this system may be of benefit to those who have not yet chosen a control system or to those who would rather concentrate their efforts on some other facet of the hobby than sit down and devise a control system.

YARDMASTER

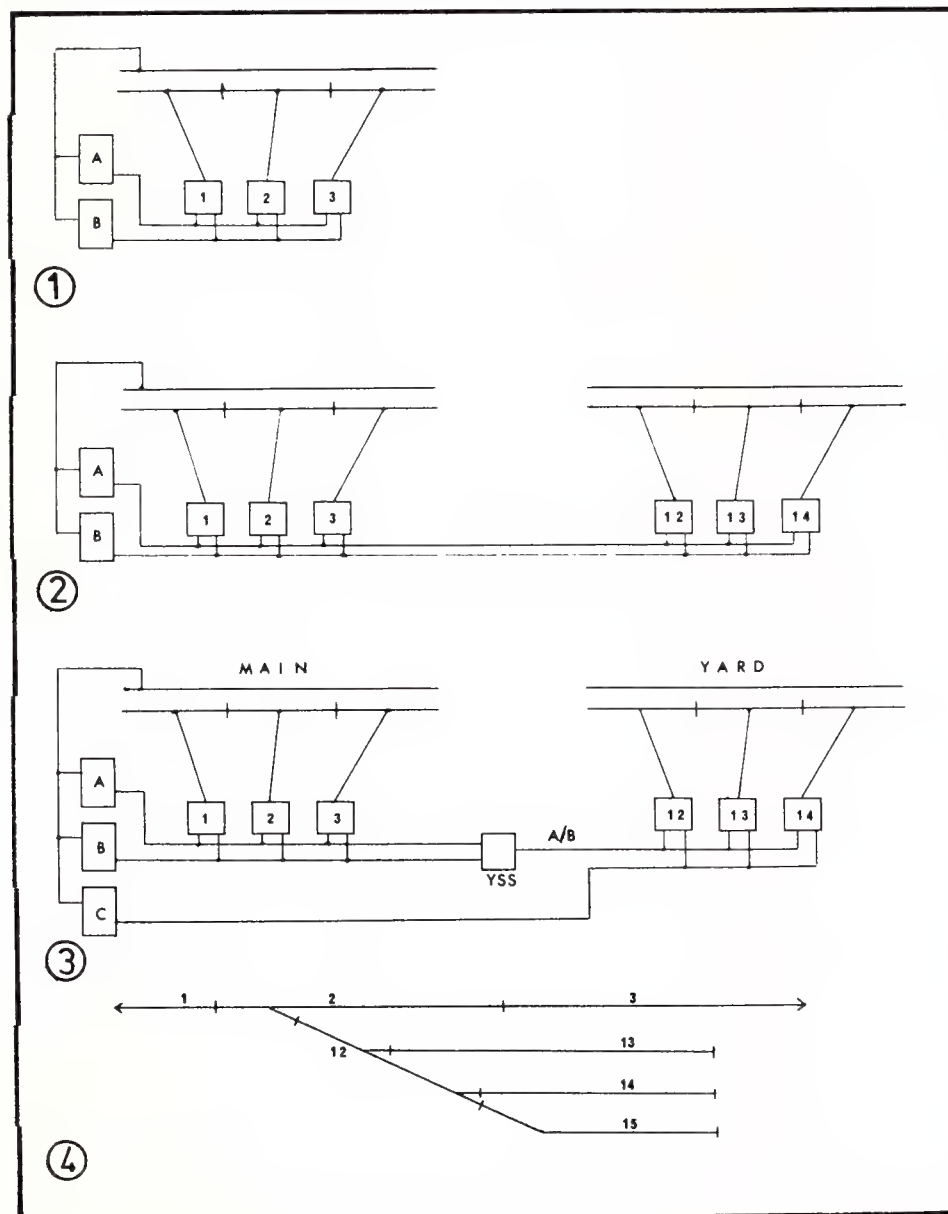
Continued from page 14

Triang locos and rolling stock with Peco track and points. Several layouts were built and dismantled until about a year ago, when the present one was started. It uses 4 H & M controllers to control Up and Down main, branch and terminals including car and wagon sidings. Timetable operation is used taking about four and one half hours real time for a 24 hours timetable. It was found that times were a little too close so a few alterations were made. Since then many hours of trouble-free operation have been enjoyed.

When operating, there is a choice of some 25-30 locos, 42 passenger cars and 100 freight cars, both four and eight wheel types. Passenger cars are, in the main, made up into 6 car sets with Motorail attached as required. Some goods shunting is done on the Up main but the bulk of shunting is done on the branch line. From the branch there is three different gravel trains — one 8 car, one 6 car and an express gravel of 5 bogie hoppers. The gravel is fine granite and makes a heavy train. There is also pick-ups, fast goods, local and express passenger trains. Plenty of movement to keep the operators busy while the clock is ticking away.

Benchwork is of 2" x 1" with 1/2" pineboard for the surface. Motors are to be placed on all facing points, trailing points on main lines to be made slip. Yard points are hand operated. Signals will be used later at turnouts to give an indication of track ahead and will be manually controlled. The track is ballasted with chipped granite glued into place and, as the hills are covered, the backdrop will be completed.

Commencing with the first running night in March all subsequent first running nights of each month will be classed as "all NSWGR" and stock of this type only is to be used. From May part of the timetable will be run simulating night operations with the main room lights out.



SAR's 45 Ton COAL HANDLING PLANT Part 1

Plans by Paul Brooks and Bob Yule.

Historical research by Ron Stewien.

In 1942 the South Australian Railways designed a new steel construction coal handling plant for use at some of the smaller steam locomotive depots in the country. Of 45 ton capacity they were intended to replace large wooden coaling stages and so avoid the huge manual task of shovelling coal from the wagon onto the stage and later from the stage to the locomotive tender. The new design filled the gap between the wooden construction 15 ton style used at Riverton, Eudunda, Snowtown, Kimba Cummins etc (see plans in March/April 1970 AMRM) and the concrete construction 100 ton style built at Wallaroo. Larger capacity concrete construction coal plants were built at Gladstone, Peterborough, Tailem Bend, Port Adelaide and Mile End. Regular steam workings ceased on the broad gauge in 1966 and on the narrow gauge in 1970. Of all the plants listed in this article only Wallaroo remained as at June 1977.

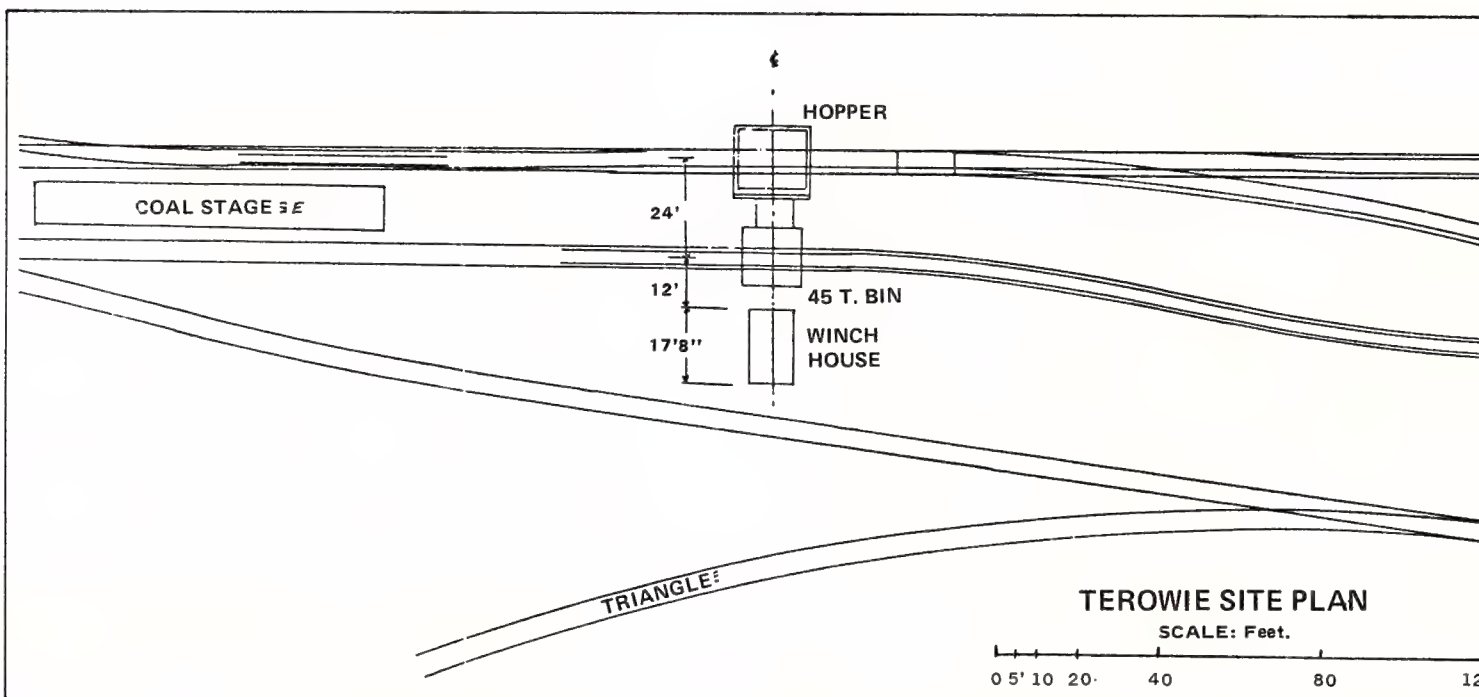
The 45 ton design used gravity discharge from coal wagons into a below rail level bin and a bucket system to lift the coal into the overhead bin with gravity discharge into the tenders. They were built at Terowie and Cockburn for narrow gauge, Mount Gambier and Naracoorte for dual gauge and at Bordertown for broad gauge. In later years broad gauge tracks were added at Terowie and removed at Mount Gambier and Naracoorte.

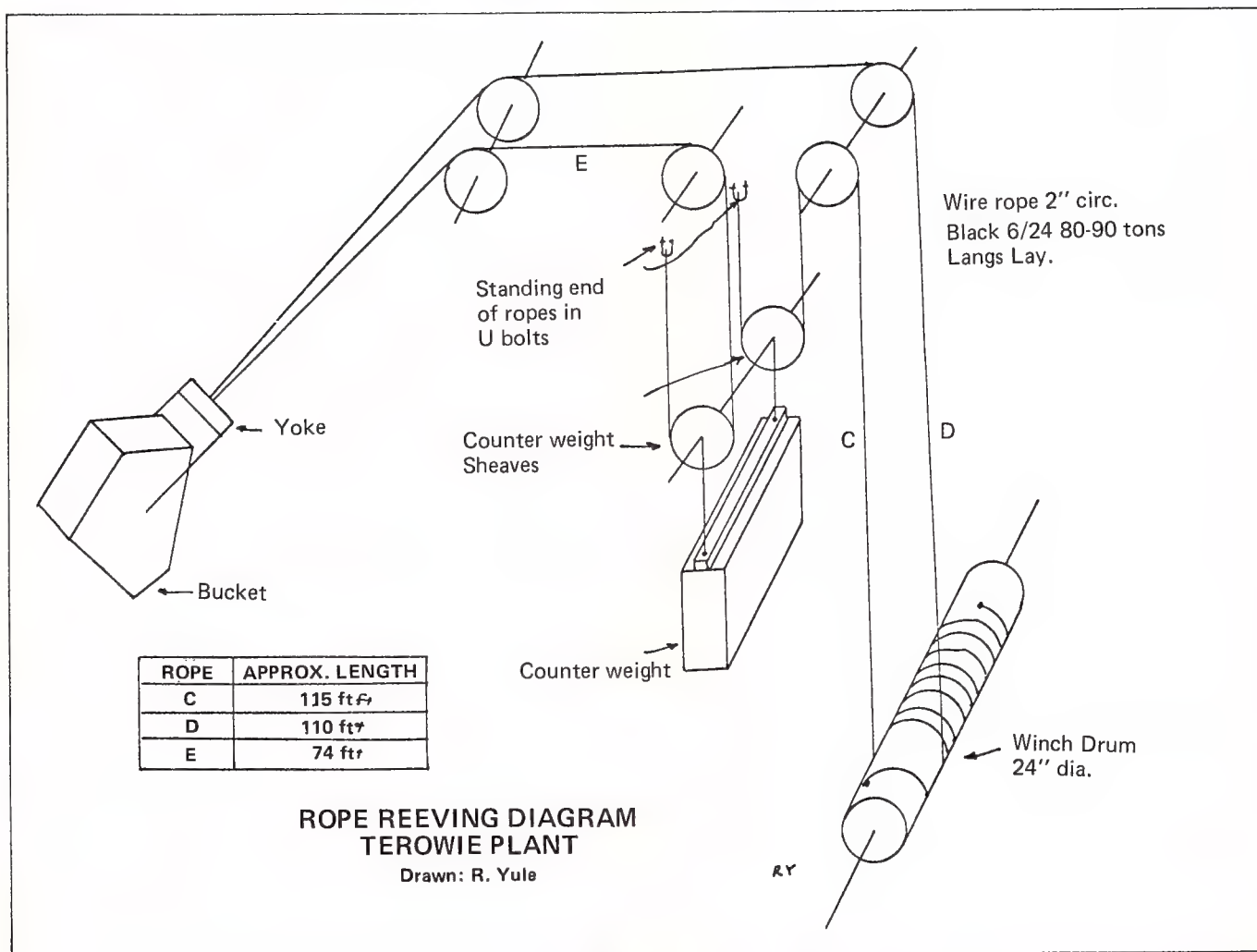
Although all five were to a standard design the trackwork limitations at each site meant that there were several distinct variations. Terowie is regarded as the standard design with the cable winch house directly behind the tower. At Cockburn there was not enough room for the winch house so it was sited off to one side which meant that the cables are redirected via a wheel frame firmly attached to a block of concrete embedded in the ground behind the tower. Space was more restrictive at Bordertown where the coal plant had to be sited over the main line. This meant that the tower had to be raised to allow a 16'3" clearance for broad gauge steam power to pass underneath. When the passing siding was extended in 1950 there was not enough room to take it around the winch house. The only

Article prepared by Phil Curnow.

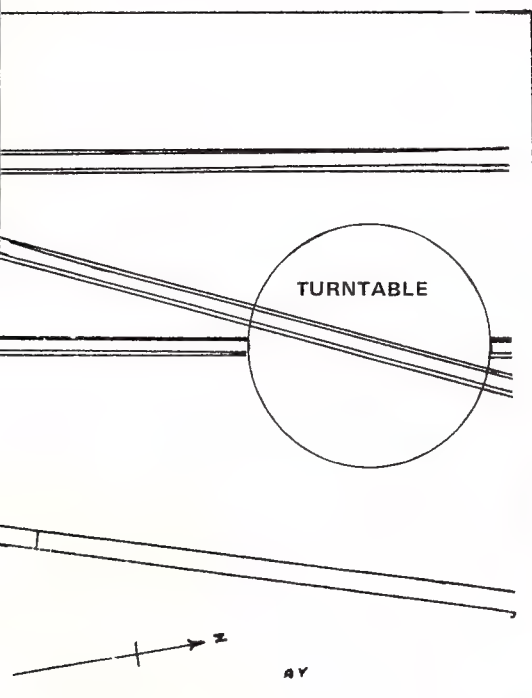


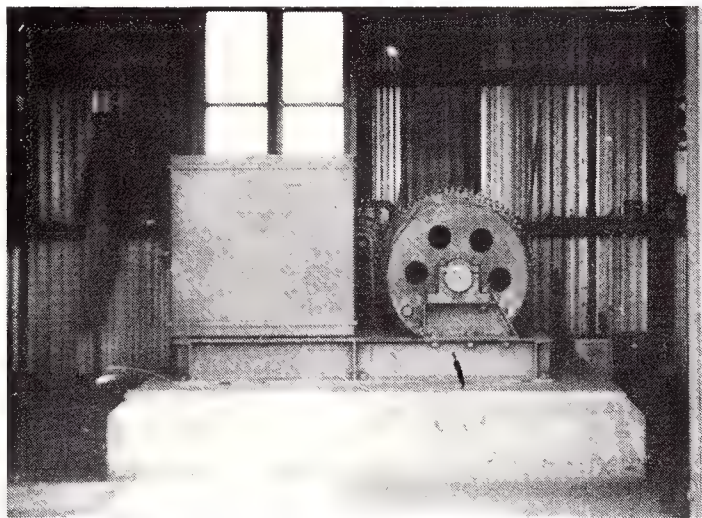
Naracoorte in 1955. Ron Stewien took this view of the dual gauge yard from high up on the water column. Construction of the coal handling plant is relevant to this article. A Y class open wagon is over the unloading bin so it looks like someone is going to be handed a shovel fairly soon.



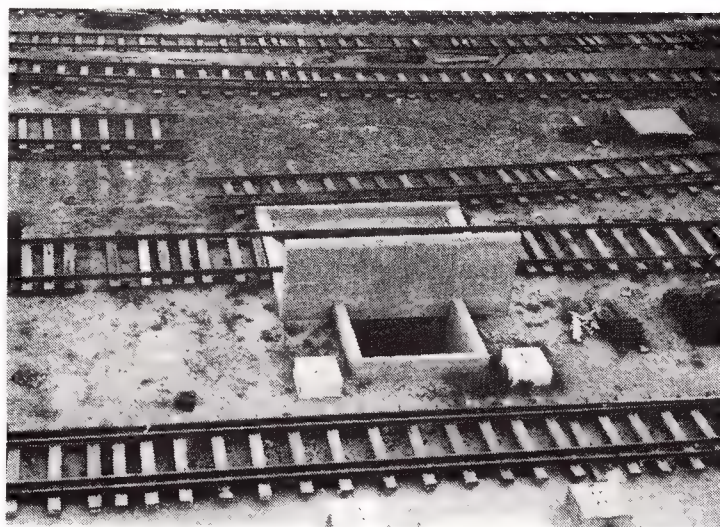


RIGHT: Terowie in 1968 showing the coal hopper's side view with the winch house to the left and the unloading bin to the right. Beyond the plant is the rear view of a 900 class diesel and in the far distance is the engine shed.





Interior of a winch house. They are hard to see but the cables go from the winding drum almost vertically. Ron Stewien collection.



Foundation for Naracoorte coal plant. Only broad gauge wagons would arrive with loads of engine coal however both broad and narrow gauge engines would require coaling hence the centred dual gauge in the foreground. Note the vertical concrete wall alongside the unloading bin. This is not clearly visible in other photos. Ron Stewien collection.



Because the winch house was offset at Cockburn we can get a better view of the framework and counterweight. Photo by Peter Fehlberg in 1969.

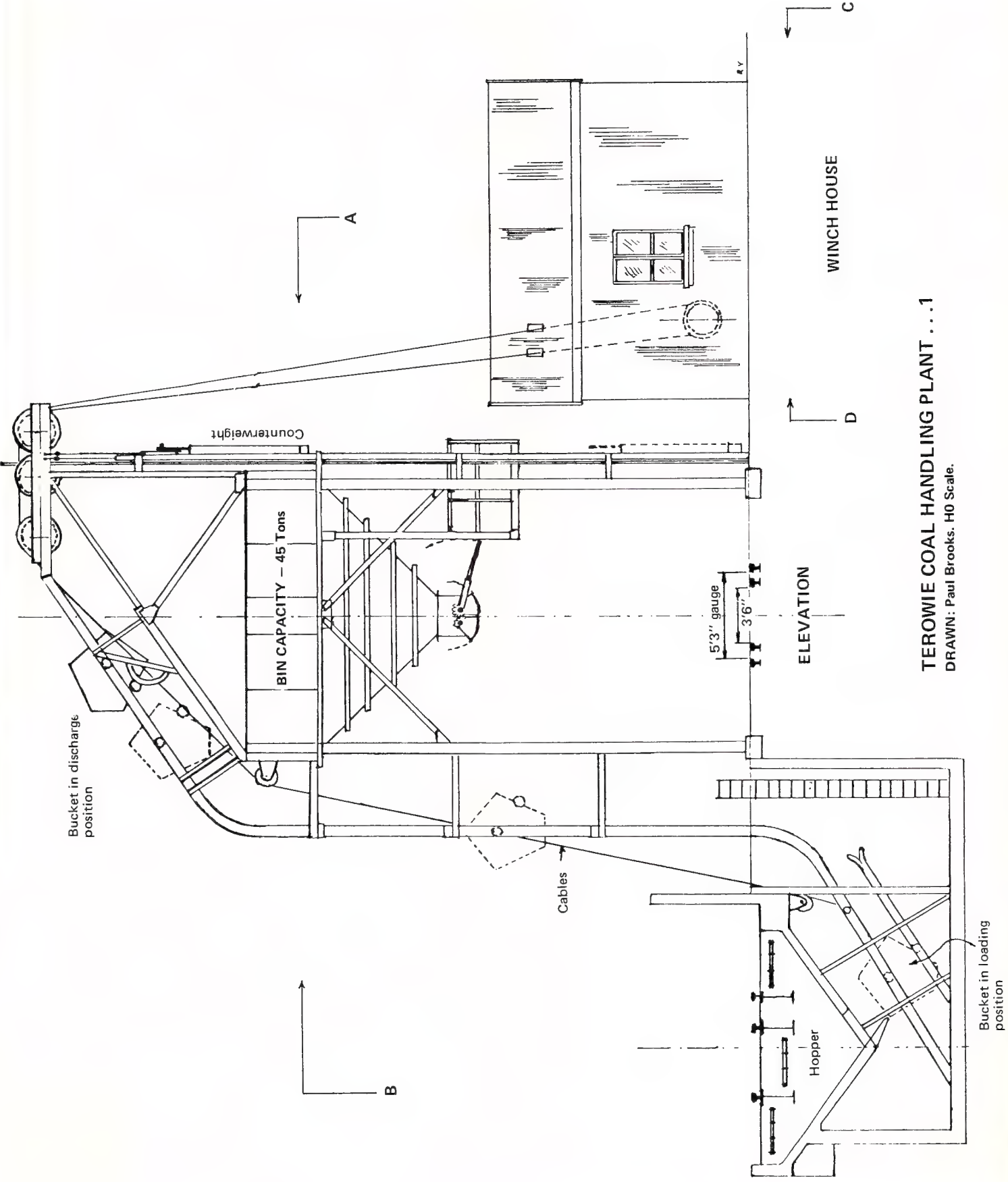


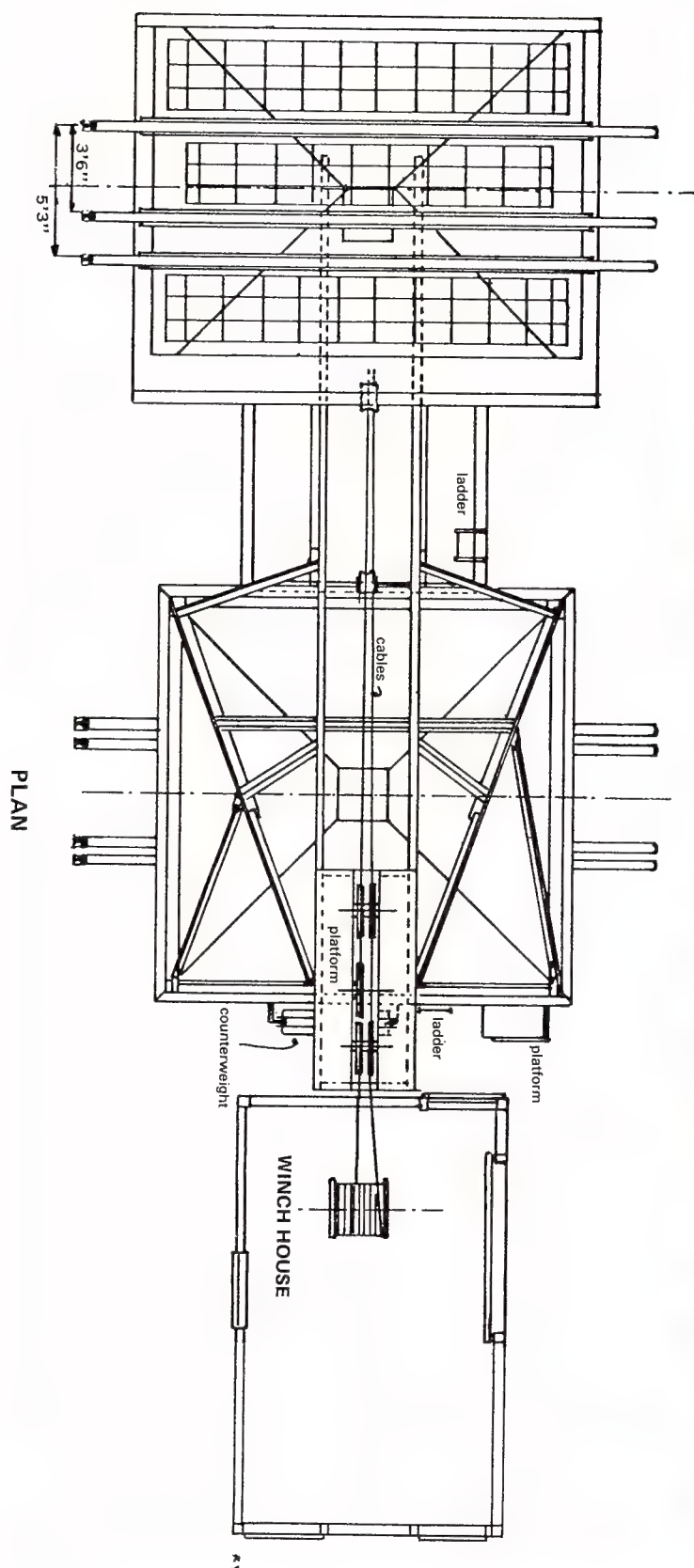
Terowie in 1968 showing the winch house.

answer was to place the winch house on a platform above the passing siding. The coal handling plants at Naracoorte and Bordertown were both raised up on concrete blocks which are clearly visible in photos whilst the others are embedded in blocks that lie at about ground level. As a result of these variations the AMRM draughtsmen have drawn separate plans for each of the major differences and the whole article has therefore been split into two parts . . . Terowie and the rest.

Terowie coal handling plant was constructed between April and December 1943 and was commissioned in January 1944. Crews of engines used during the rapid traffic build up caused by the movement of men and machinery for the World War 2 effort must have surely rejoiced when the old wooden coal stage was replaced by a mechanical coal plant. When the broad gauge shunter (usually an Rx class 4-6-0) was withdrawn in the mid sixties and replaced by a 500 class diesel there was no

longer any need to retain the plant as Terowie was only about fourteen rail miles from the main narrow gauge depot at Peterborough. Narrow gauge shunters (a T class 4-8-0) were withdrawn after the line to Peterborough was converted to broad gauge in 1969. The coal plant was removed about this time to make way for trackwork alterations. Paul Brooks commenced drawing these plans to H0 scale prior to building a model. At the time of writing (July 1977) the model





TEROWIE COAL HANDLING PLANT . . .2

DRAWN: Paul Brooks. H0 Scale.

has not been completed. This would make a good project for a scratch built model as the bin and foundations could be made from styrene sheet, the columns and angles from either Plastruct or possibly Northeastern wood-shapes, the winch house from galvanised iron

produced by Cambells or Northeastern and finally the various pulley wheels could be modified handbrake wheels or else brass or plastic discs. A rope reeving diagram has been included for the modeller who wants to be super accurate or who wants to astound his

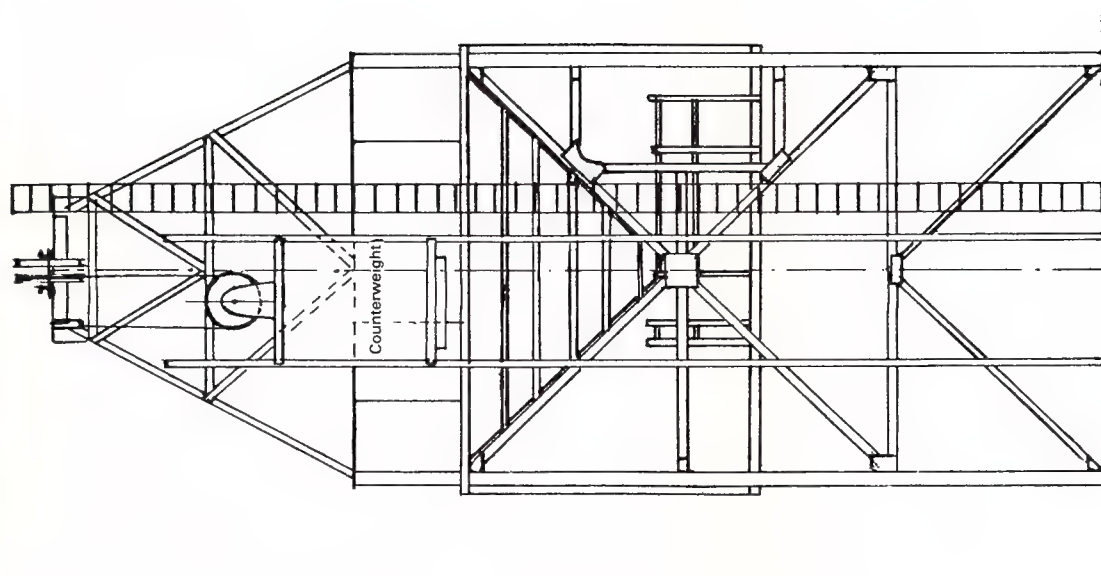


This is a composite of two photos of Cockburn yard scenes but clearly shows part of the framework for the bucket guides. Photos from the collection of Lionel Noble.

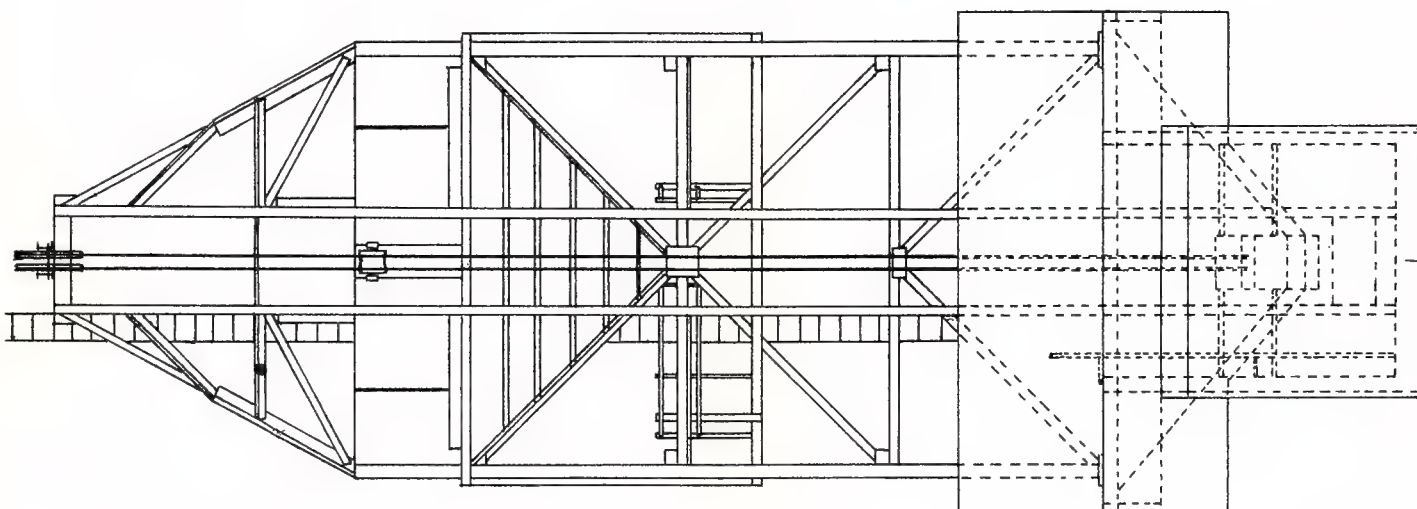


visitors by having everything operable. It will also illustrate how the whole thing operated. 'Warrington' and 'Langs Lay' describe methods of weaving wire into rope that will have a breaking strain of 100 ton.

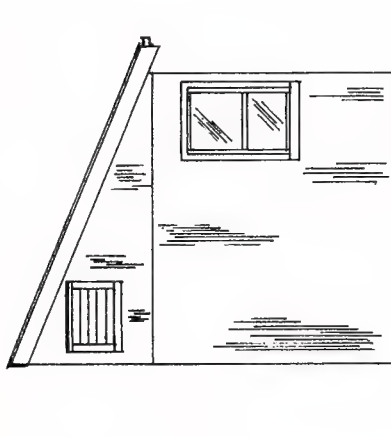
Part 2 of this article will follow in a future issue and covers other gravity discharge 45 ton coal handling plants in use on the South Australian Railways during the latter years of the steam era.



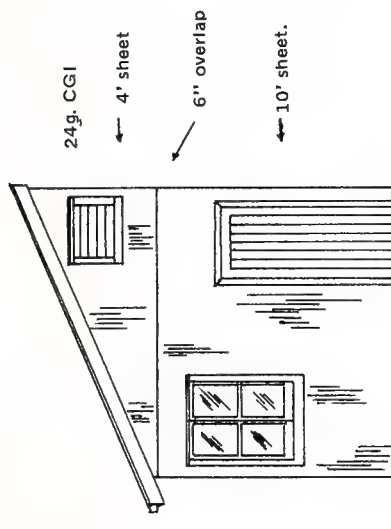
SIDE ELEVATION A.



SIDE ELEVATION B.



END ELEVATION D.



END ELEVATION C.
WINCH HOUSE

TEROWIE COAL HANDLING PLANT . . . 3
DRAWN: Bob Yule, H0 Scale.

STEAM BEHIND THE BRAKEVAN

by Phil Curnow

One feature on a model railway that can be built to complicate train running is a steep grade that requires an assisting engine at the front or a banker at the rear. How do we make it work as on the prototype? Perhaps the following information will help give you a few ideas.

Now that steam has virtually disappeared from Australia the sight of a steam engine pushing or banking a train up a heavy grade is just a memory. There were several well known examples of regular banking, including:-

- (1) Two "RX's" on the front of the "Overland" and one at the rear on the climb through Mt. Lofties — before the 500 class took over.
- (2) The long climb out of Stawell towards Melbourne required an assistant engine to be stabled there to assist heavy wheat and regular goods trains.
- (3) In the late 1960's K class 2.8.8's, running tender first, assisted T class diesels with 1,000 ton wheat trains on the Wail Bank out of Dimboola.
- (4) NM class engines at each end of the coal trains through Pichi Richi pass.
- (5) Banking in both directions out of Bathurst in N.S.W.

In July 1971 I spent a cold, but very interesting, Saturday watching a steam banker in action on Tumulla Bank which is on the western climb out of Bathurst. A 44 class Alco was rostered on the Raglan Bank for Sydney bound trains. Trains heading west from Bathurst roll through level country for about 10 miles until they reach Georges Plains station. Tumulla Bank begins its 4 miles of single line 1 in 40 beyond this station so bankers are based here. If two successive trains required banking the second would be delayed for up to an hour until the engine returned.

It was just after midnight and bitterly cold when we arrived in Georges Plains and joined the Signaller beside his roaring fire. Around 2 a.m., Baldwin built Mikado, 5907 returned from its previous run up the hill and was set back into the dock siding. Within minutes the crew had joined us for black tea and sandwiches before preparing for the next run.

Shortly afterwards a 44 class 1800 H.P. diesel brought a train of general loading into the yard and 5907 was moved up behind the brakevan, but not coupled to it. A long blast on the deep toned "river boat" whistle of the 59 to signal all clear at that end was followed by an answering scream from up front. The two moved the train slowly out of the station and speed built up on the fairly gentle climb for the first mile before both engines dug in as the grade steepened and speed settled to about 10 m.p.h.

The 44 was clearly visible in the moonlight and the sparks from its exhaust rose rapidly whilst the 59 slogged away at the rear. With such low speeds and heavy work the 59's fire was prepared thickly and even a camera fan could aim the coal shovel through the fire door without spilling half the coal over the floor.

At Tumulla signal box the staff was exchanged on the run and the 59's crew received a special staff to allow them into the next section. As the train approached the 161m 30ch post, which marked the drop off point, the 59 was driven wide open to allow the 44 to accelerate slightly, then a short whistle and we watched the brakevan lights moving away from us.

The 59 stopped, then began to reverse down the hill exchanging the special staff for the Tumulla-Georges Plains section. Conditions were not very pleasant as the cold wind whipped over the tender and into the exposed cab; the signaller's fire would be very welcome.

It was nearly 6 a.m. and although the 59 was staying until mid-morning the crew and signaller were nearing the end of their shifts, so while the signaller finished his book entries and cleared his office before leaving at

6.30 a.m. the crew went out to refill the tender.

The temperature dropped to about 20 degrees Fahrenheit overnight (water pipes burst in Goulburn loco depot) and the crew found, to their sorrow, that the water column had frozen. They played a stream of hot water from 5907 over the column for five minutes before ramming a fire iron up the spout. With tender filled, fire set and engine stabled in the dock siding, the crew returned to the fire in the signal box to wait for a train to Bathurst.

The procedure was different for the next train, when 4509 arrived with 669 tons, for there were several four wheelers near the brakevan. This ruled out rear end banking because "S" trucks don't ride too reliably when being shoved hard. The 59 was attached behind the 45 which was an unusual arrangement for it meant that the engine had to go through to the next stopping point, which was Wimbledon, at the far end of the grade.

Also of interest was the diesel which is similar to the SAR 600 class. The 45 class Alco hoods, with 42 and 421 class GM's, were the mainstay of the Central West. The GM's, however, proved too harsh on the track and were returned to Sydney; the 45's were grouped with the rest of the clan at Newcastle. A large group of 44 and 48 class Alco's (SAR 930 and 830) were brought in to replace them and in July 1971 only four 45's were still out West.

Just after dawn the 45 and 59 combination began their long climb. Ice still covered the stock water dam and heavy frost was everywhere. Exposed hands and faces began to turn blue. Viewed from near Tumulla signal box smoke and steam seemed to fill the valley while the familiar Alco roar was all we could hear. As the train moved more side-on we could hear the slow slogging Baldwin beat which was soon lost when the train passed through a shallow cutting but it re-asserted itself as the train worked away from us. When



Two photographs of 3649 banking a freight near the top of Tumulla Bank on 12th October 1966. The photographs were taken between Tumulla Crossing Loop and Wimbledon. Around the next curve is the top of the bank, where the banker drops off and rolls back down the grade to Georges Plains to wait for the next call to duty.

The freight in the photographs is the return working of the famed W44 concentrate train, conveying the empty ore wagons back to Broken Hill for another load. In 1966 modified G wagons were being used for this. The CG wagons came later.

Photographs by Alan Templeman.



we caught up to the train again it was on the reasonably level section approaching Wimbledon and with the hard work behind the 59 was just drifting. Both engines were cut off at Wimbledon to allow the 59 to prepare for its return, light engine, to Georges Plains then, surprisingly, to Bathurst.

At 2 p.m. a 44, with 690 tons = 60, from Sydney arrived in Bathurst. Rather than send the banker light engine back to Georges Plains, it was coupled behind the diesel for the level run and the train was soon rolling out at a steady 45 m.p.h. before slowing for the station. We expected the train to stop to allow the 59 to bank from the rear, and so avoid another trip to Wimbledon, but the train rolled straight through and onto the grade.

In mid-afternoon the steam wasn't condensing heavily so most of the exhaust was good wholesome coal smoke which stood straight and high above the train as it laboured through Tumulla loop. We left the area not long afterward as the 59 was scheduled to stable in Georges Plains for the remainder of daylight.

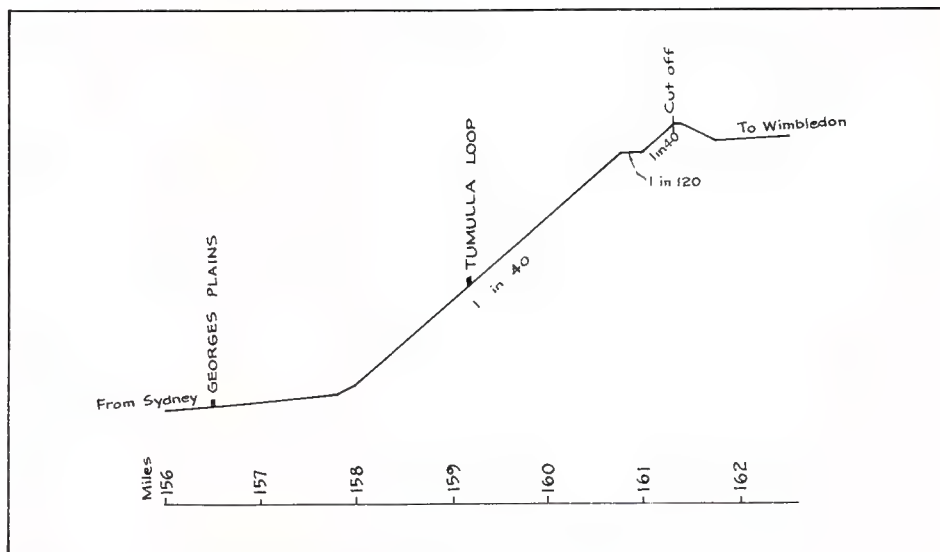
During the night shift several trains had passed through Georges Plains and five had been banked. Maximum load for an 1800 h.p. diesel (42, 421, 44 and 45 classes) was set at 600 tons and 800 tons if banked up the grade. Regulations that applied at the time included:-

a) Passenger trains were not assisted from the rear,

b) Four wheelers in the rear half of the train prevented rear end banking and

c) Trains close to engine load were banked to avoid the possibility of failure on the grade.

In 1975 banking was still a regularly rostered duty for 48 class diesels, eleven of which had specially modified couplers to allow them to detach from the brakevan without stopping the train. Evan SAR 847 (on hire to NSWPTC)



was used as a banker on Raglan although not fitted with special couplers. It, therefore had to be attached to the front of the train.

Unfortunately, steam banking ceased about a year after my visit. However, if you would like to hear what it was like, and do a little bit of imagineering, then obtain a copy of the 12" record "Helper Service-Steam Action Vol. 3", distributed by W. & G. with the serial number WG-B-5051. This record has recently been re-released and was taped in 1965 without diesels and has seven Tumulla tracks featuring 50, 38, 36 and Garratt classes plus three other tracks for \$7.95.

AMRM is currently preparing plans and diagrams of the Tumulla Bank area to assist those modellers who wish to incorporate a similar 'banking' operation on their layout.

The advertising deadline for the May/June 1978 issue of the Australian MODEL RAILWAY Magazine is the 21st April 1978. Please be early.

In the past I have contributed a few articles which described various small accessories and in each case I was describing something I had actually made, used and proved.

This time I am describing something not yet built, based on someone else's idea and my only excuse is that my output is so low (and getting lower!) that it might be some time before I can build and test a unit.

It all began with one of those Krauss 0-4-0T, made I think by Eggerbahn. I have a small, incomplete HON 2½ layout and the Krauss is the only locomotive. Whilst I have seen others that seem to work well, mine never has and new pick-ups and more weight have only partly solved its difficulties, a complete new chassis is really needed.

So when I went to Sydney Town Hall last October I kept an eye open for a cheap N gauge locomotive as a basis for a new locomotive. I had in mind an 0-6-0T but all I could find were some "Life-Like" diesels on the stand of Trains, Boats N' Planes of Concord. This was hardly what I had in mind but at \$10 was worth a close look. Back home I found several drawings that looked promising so, doubting that such prices would ever be seen again, I eventually got three, the greatest number my layout is capable of using.

With a reliable chassis and the first narrow gauge superstructure nearing completion the motive power problem was solved. However, naturally, another problem was created. My one aging resistance controller periodically burned bits off itself so that the maximum resistance is somewhat reduced, resulting in scalded cat starts. Now, with up to three locomotives to control at once, updating of the control system cannot be far away.

Now I get the feeling that the average modeller spends a lot of money on his hobby. It's hard to imagine how there could be rapid growth in quality, quantity and cost of models otherwise. I take it then that I am not an average modeller, because the prospect of buying even three simple resistance controllers was beyond my modeller's purse. The new controllers therefore have to be something I can make myself and this brought to mind something I saw some years ago.

Long before I'd ever heard of a Thyristor or "pulse power", someone produced a clever design for controlling train speed, using a

ECONOMIC CONTROLLER

special commutator in which the segments were not parallel bars, but rather elongated triangles, so the insulators were also elongated triangles. The commutator was driven by a motor and the brush could slide parallel to the axis of the commutator. Sliding the brush along gave a variation in the "mark-space" ratio, so the output taken via the brush was a variable pulse at full voltage.

When resurrecting this design in my mind, it occurred to me that the variable commutator lends itself to infinite extension, I could have my three controllers, or thirty-three if I liked, side by side on a common shaft driven by a

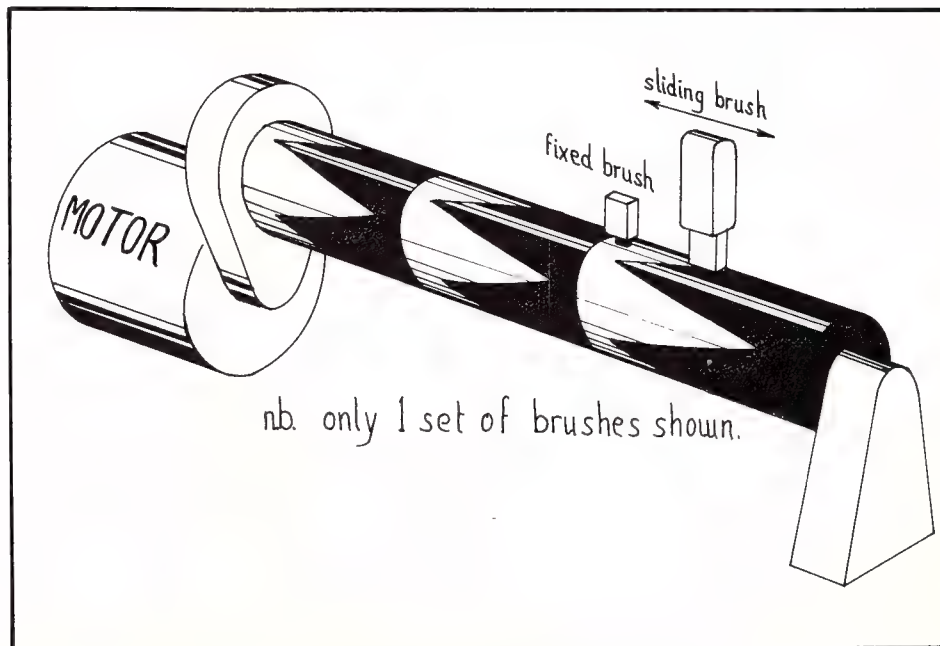
single motor.

This might not be ideal for a layout with several operators jockeying for position but at least two could work quite comfortably I feel.

To get maximum life and reliability, I think a low surface speed should be aimed for. I intend to try a diameter of an inch, six segments and 500 r.p.m.

I shall use a gramophone motor, as I have a couple in good condition, but probably a good quality "can" motor would be adequate for a single controller.

D.J. Thomas



CONTAINER WAGONS OF NSW

Bob Gallagher and Paul Rogers introduce the various types of container vehicles employed by the New South Wales Public Transport Commission, many of which will form the subjects of plans in future issues of this magazine.

The railed movement of containers in Australia can be traced back for several decades but it was not until the late 1960s that such traffic assumed a prominent part of train working. The increased activity related to container handling which has occurred during the past ten years caused the construction of many vehicles for this role. These circumstances have also necessitated the assembly of a fleet of older wagons, of which some units have been altered for container handling on a permanent basis.

There was a time lag between the advent of large scale container movement and the delivery of sufficient quantities of suitable railway vehicles for this task. In New South Wales, many makeshift arrangements were employed to overcome the shortfall in container wagons. For instance, BDL and BDX bogie open wagons were seconded for this work; another method frequently adopted was to place 6.1m containers in K wagons. Some of the vehicles in the last group had their doors removed to enable the containers (if of the side loading type) to be loaded and unloaded without their removal from the wagons. As container cars, K trucks saw widespread service, including runs to and from Brisbane — a route which contains restrictions on the use of four wheeled wagons beyond South Grafton.

The most suitable type of vehicle for container haulage is, of course, the flat wagon. Some units in this category had been available for the carriage of specific types of containers — the CME wagons for LCL boxes, for example, and the TVF/TVX flexi-express vehicles — and other classes have been added to this fleet in recent years. However, there was a major requirement for wagons capable of handling the variety of containers built around the 6.1m and 12.2m dimensions. Early vehicles built to meet these needs were usually of the "pure" container type but, in the last few years, the philosophy has switched to wagons which can satisfy multi-purpose needs.

The growth of container traffic on the New South Wales system has been impressive: this segment of freight haulage now accounts for more than \$20 million revenue per annum. There are three components of containerised cargo hauled by the Public Transport Commission: these comprise traffic generated by freight forwarders, that handled by shipping companies, and cargo consigned by the medium of RACE (Railways of Australia Container Express). The proportions of this traffic are currently 11.3%, 58.5% and 30.2% respectively. The bulk of freight forwarding and RACE traffic lies in the interstate haul while movements made on behalf of shipping companies are split into approximately equal interstate and intrastate divisions. During the past year, RACE consignments have increased by 140% over the previous corresponding period. About 90% of current RACE traffic has been won from road hauliers.

Wagon Descriptions

As an introduction to the container wagons currently in use on the NSWPTC network, brief details follow. A full description of vehicles will be presented in later issues of the magazine.

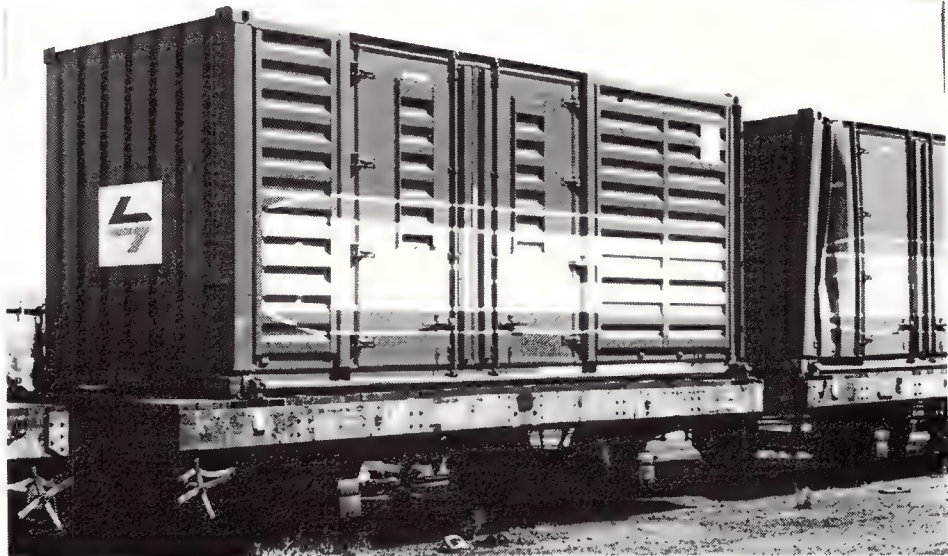
SO: These units are four wheeled S wagons which have been modified with removable transverse partitions to accept small containerised or palletised loads. No. in service: 11*.

CS: These are four wheeled S wagons with sides and ends removed to accommodate small containers. No. in service: 4*.

CKF: A large quantity of KF flat cars were modified with container mountings and assumed this code. These vehicles were covered in



TNT containers in a NSWPTC 'GM' open wagon at South Brisbane.



A 'CKF' container wagon with a RACE container. The 'CKF' was converted from a 'KF' which in turn was converted from a 'K' or 'U' wagon. B. Gallagher photo.

the September/October 1977 edition of A.M.R.M. No. in service: 97*.

BC: These long bogie flat vehicles can carry various types and quantities of containers, subject to a maximum equivalent of 10 LCL boxes. At the time of their introduction, these 22.25m cars were the longest freight cars employed on the New South Wales system except for certain special purpose types. Most BC cars have been modified and now appear under a variety of codes suitable for general duties, container loadings and piggyback traffic. No. in service: 3*.

BCX: The bogie exchange version of the BC wagon. No. in service: 65*.

CBX: Another variant of the BC vehicle. Like the BC and BCX cars, the CBX is a multi-purpose unit. No. in service: 49*.

CME: A variant of the basic UME flat wagon, the CME is suitable for carrying 2.5 or 6.1m

containers. No. in service: 33*.

CMX: The bogie exchange version of the CME wagon. No. in service: 5*.

FME: Another variant of the basic UME design which has been fitted for container traffic, the FME carries up to 6 LGL boxes. No. in service: 5*.

GME: A further member of the UME family, this type of vehicle can carry twin 6.1m containers. No. in service: 9*.

FMW: These flat wagons are reserved for carrying refrigerated meat containers of private ownership. These are the vehicles used in captive "Aberdeen Grain Fed Beef" service. No. in service: 10*.

EBC: An off-shoot of the BC vehicle, the EBC is fitted with 415v AC equipment and piping to handle refrigerated containers requiring an external power source. No. in service: 7*.

ECX: The ECX cars, which comprise a modified SCE design, are fitted with facilities identical to those mentioned in relation to the EBC. No. in service: 30*.

ICX: Like the ECX, the ICX vehicle is a bogie exchange version of the SCE unit. However, the ICX is restricted to "dry" containers. This type of vehicle is one of the standard bogie container/general purpose flats used on the N.S.W. system. Most vehicles were built new but in recent years the class has been strengthened by conversions from the ECX and SCE codes. No. in service: 139*.

SCE: This type of vehicle was the forerunner of the ECX and ICX types. It is fitted for "dry" container traffic but, unlike the ECX and ICX versions, it cannot be employed on bogie exchange operations. When constructed in the late 1960s, the SCE units used surplus bogie for steam locomotive tenders but some have gained conventional freight bogies. Several SCE units were converted to ECX and ICX codes and at least 1 wagon has managed the hat-trick. No. in service: 36*.

TVF: This type of freight car is constructed especially for flexi-express operations. No. in service: 10*.

TVX: The bogie exchange version of the TVF vehicle. Both types can carry twin flexi-vans, flexi-flats, flexi-trays or flexi-tanks. No. in service: 33*.

OCX: The New South Wales version of the 19.2m R.O.A. design first mooted in 1967 at an A.N.Z.R. Conference. This type of vehicle was the forerunner of the OCY and CFX types. Equipped for handling the equivalent of three 6.1m units, the OCX was envisaged as a "pure" container wagon although the later variant is a multi-purpose unit. No. in service: 90*.

OCY: One of the first vehicle types to be fitted with the 2CM type bogie when new, the OCY is a development of the OCX vehicle mentioned above. It is the standard medium length N.S.W. flat wagon and one of the most versatile wagon designs employed by the Public Transport Commission. No. in service: 467*.

CFX: A further development of the OCX/OCY design, the CFX has, in addition, "low profile" bulkheads at both ends of the vehicle. It is a bogie exchange vehicle like the OCX unit. No. in service: 160*.

JCW: These 24.5m wagons are among the longest "regular use" freight vehicles operating in New South Wales. They have counterparts in other States; viz. the FCW (ex-FCF) of VicRail and the SFCW of South Australia. The JCW wagons were intended for captive General Motors-Holden/Thomas Nationwide Transport traffic but they now see a great deal of use hauling RACE boxes. The JCW wagons can carry the equivalent of four 6.1m containers (of both ISO and non-ISO types) subject to certain load limits. No. in service: 82*.

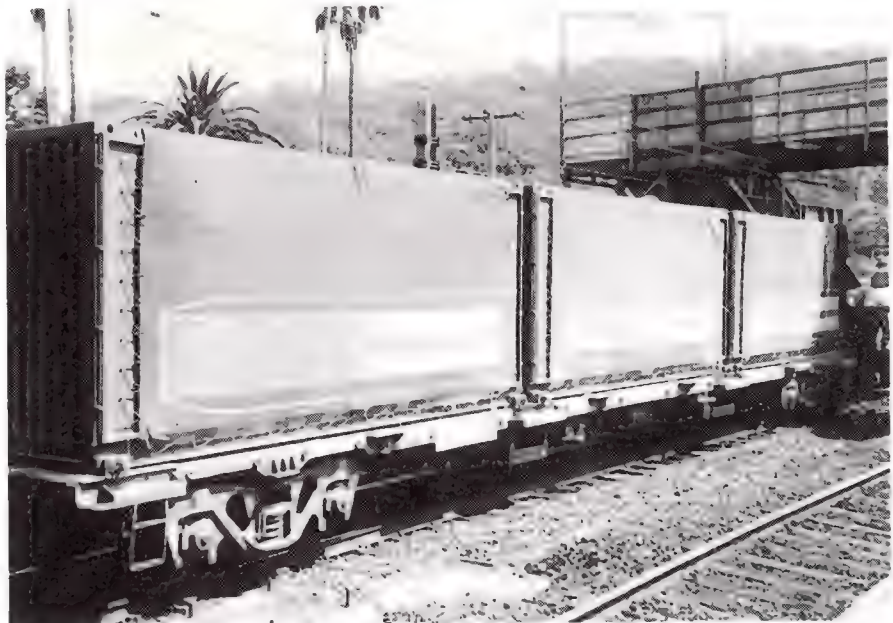
SBC: This version of the BC wagon is equipped for special container workings although further research will be needed to determine the exact traffic for which they are used. They also appear to have been used for other types of cargo and are fitted with heavy duty bogies. Several have returned to other duties; thus: No. in service: 1*.

OSF: These vehicles, capable of carrying the equivalent of two 6.1m boxes, were built from components salvaged from surplus BSV type sheep vans. One common sight is the operation of these vehicles with 12.2m LRC type RACE refrigerated containers. No. in service: 106*.

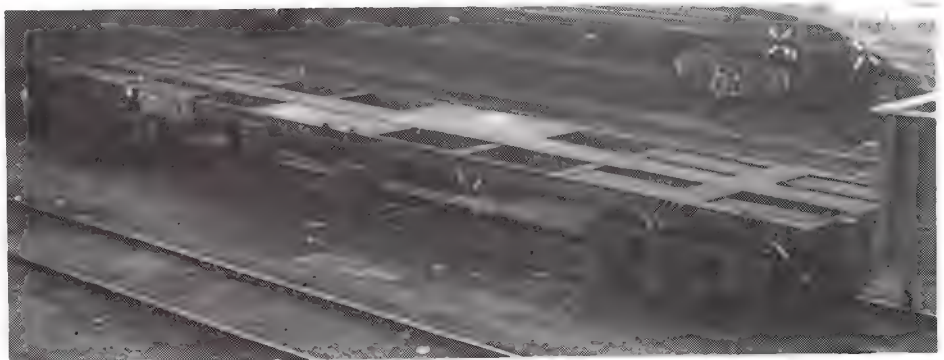
* The quantities shown for these vehicles relate to the numerical strength of each group as at April 1977. The information was compiled from the Return of Freight Rolling Stock for the Accounting Period 11/76, a Public Transport Commission document. Readers will be aware that conversions of rolling stock are a continual event and an attempt will be



At the sea terminal a 48 class leads a container train to the Glebe terminal in December 1977. Photo by Bob Gallagher.



OCY with three RACE containers. Photo by Paul Rogers.



Open decked NSWPTC 'ICX' awaiting a load of containers. Graham Ball photo.

made during the individual wagon studies to list each vehicle covered by a particular code.

Operation

Before turning to detailed descriptions of the wagons, a few notes on their operation are presented. On major workings between principal container centres, block loads are employed. The distance of such journeys can vary from the shuttle services run between White Bay and Chullora, Villawood and Yennora terminals in Sydney to intersystem operations.

Where heavy lifting gear is available, the container vehicles serving those locations are

normally loaded to box capacity, subject to any load limitations placed on the flat wagon. Many loading and unloading sites have less complex facilities and various methods are employed to transfer freight to and from containers. Two of these methods are by forklift truck or manual labour. In some cases (for example, when end-loading boxes are used), container wagons are restricted to less cargo than their capacity. This allows an unloading space on the vehicle itself.

There are many interesting facets of container working and it is hoped to mention some of them during the course of the series.

from good hobby shops everywhere

SOME OTHER **AMC** DISTRIBUTED PRODUCTS



TREES FOR ALL GAUGES, GRASS MATS, LICHEN, SCATTER
MATERIALS
SEE AMC FOLDERS SERIES "U"

AMC MISCELLANEOUS ELECTRICAL GEAR

CABLES, SWITCHES, PLUGS & SOCKETS, GLOBE HOLDERS,
GLOBES, ALLIGATOR CLIPS ETC. ETC. - H & M ELECTRICAL
EQUIPMENT.
SEE AMC ILLUSTRATED PRICE LISTS SERIES "E"

Construction Parts & Aids

"ROMFORD" DRIVING WHEELS & AXLES; "MW" MOTORS & ARMATURES;
"K" & "M" MOTORS; "MGW" WHEELS; "RATIO" COACH & WAGON PARTS;
"ROUNDHOUSE" BOGIES; "KINGSPRINT" RUB-ON INSIGNIA &
LINING; "ERG" CONSTRUCTION PARTS AND COUPLINGS; "MAC"
LADDERS; "JACKSON" COUPLINGS; BRASS SCREWS, NUTS ETC.;
RAW MATERIALS, STYRENE SHEET, METALS ETC.
SEE AMC ILLUSTRATED FOLDER SERIES "C"

"MODEL RAILWAY NEWSLETTER", "MICE" AND PRICE LISTS ARE AVAILABLE FREE FROM ALL ACCREDITED AMC STOCKISTS
SEND SELF ADDRESSED 9" x 4" ENVELOPE AND 20c STAMP TO RECEIVE YOUR PRICE LISTS BY MAIL

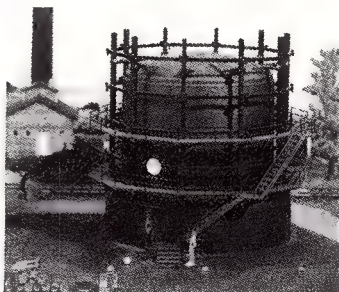
VOLLMER

HO/00

- 5722 Coal Loading Hopper, electrically operated,
115 x 115 x 70mm \$25.95
5725 Gasometer 210 x 185 x 145mm \$17.50
5758 Roundhouse, Six Stall \$59.95

- 5715 Goods Shed 380 x 130 x 135mm \$14.50
5716 Goods Platform with canopy 820 x 48 x 80mm \$ 9.25
3753 Fire Engine House 170 x 120 x 140 \$10.95

- 4507 Pier & Ramp Set: 3 straight and 3 curved ramps,
piers with top & base plates \$24.95

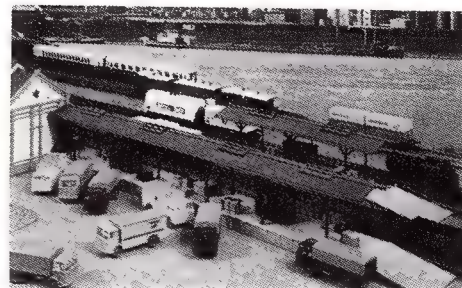


HO/00 and N



and N

- 7540 Goods Shed 235 x 95 x 80mm \$9.50
7541 Goods Platform with canopy 520 x 35 x 48 \$6.25
7776 Fire Engine House 130 x 88 x 80mm . . . \$9.50



SEE AMC PRICE LISTS SERIES "V"

★★★★★ from good hobby shops everywhere

FOR TRADE AND GENERAL ENQUIRIES:-

AUSTRALIAN MODEL CRAFT CO., 577 Dean St., Albury, N.S.W. 2640 (P.O. Box 118)

A GM-12 CONVERSION

2 x F7 + SD9 doesn't make 8 lemons. Rod Parry reckons it makes a GM-12, and he's right!

Late in 1971, the Victorian Railways leased three GM12 Class locomotives from the then Commonwealth Railways to overcome a severe locomotive shortage. The three locomotives GM31, GM32 and GM34, spent over four years running on Victorian rails and became well known and very popular amongst the local railfans. Since the GM's had become such a well recognised identity on the Victorian Railways standard gauge scene I felt justified building a model of a GM to run on my as yet to be built, Victorian Railways oriented layout.

The body of the model was fabricated by joining two Athearn F7 body shells. The two bodies were initially prepared as shown in the diagram. The "drake's tail" section at the end of the roof of the first body was cut off flush with the back wall and the area of the back wall shown shaded in the diagram was cut out and removed. The remaining area of the end of the body was filed free of detail and sanded flush with 320 grade silicon carbide paper. The rear two steps on each side of the body were cut off and discarded. The fuel tank skirt on each side of the body was cut off along the line shown in the diagram and was retained for later use. The cab doors on either side of the first F7 body and the two steps immediately below the door (the area inside the dotted line on the diagram) were cut out leaving the rectangular area inside the dotted line completely empty. This operation was performed by drilling out most of the section with a hand drill and filing out the rest of the area with a needle file.

After the major cutting had been finished on the first F7 body, the second body was tackled. The end of the second body was cut off so as to get a piece 10.5 scale feet long as shown in the diagram. The steps on both sides of this piece were removed. The door in the end of the section was filed out to the inside wall of the vestibule connection block.

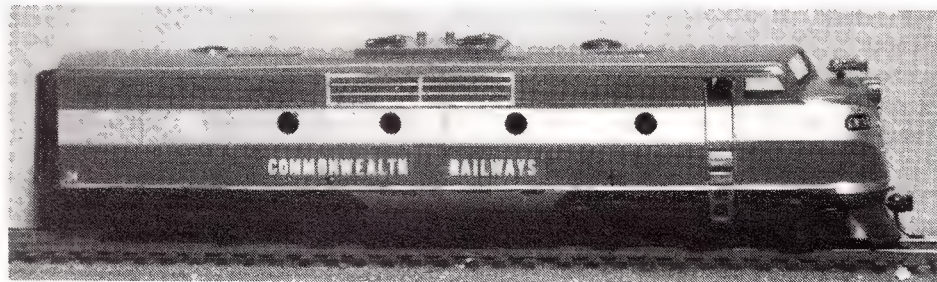
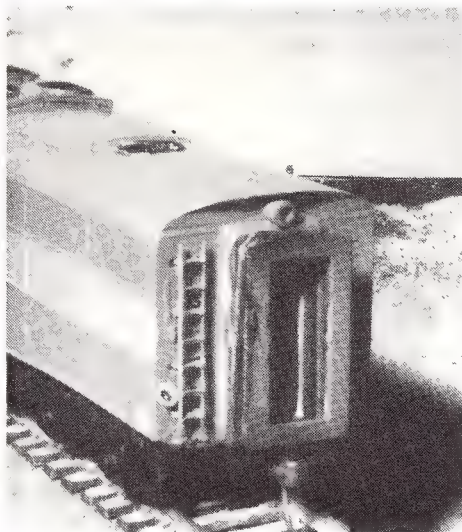
The two pieces were then held together such that the second shell formed an extension of the first. Methyl ethyl ketone was then applied to the inside of the join between the two bodies. The two bodies were kept firmly pressed together until they were firmly stuck. The resultant body was left for a few days until the joined section gained full strength.

The next step was the most time consuming one. All the external detail including fans, air



GM-34 passes Robertson signal box on the "down". Photo taken on the layout of the Melbourne Model Railway Society. Photo: Rod Parry.





and the sides were filed such that when the two pieces were fitted together the peaked roof effect was formed. The housing was MEKed in place 1.75 ft from the front edge of the centre roof hatch. The radiator fans were Kemtron brass fans cut off at the rim and Araldited in place. Pieces of brass filed to the correct shape were used for exhaust pipes. Kemtron brass fans were also used for the forward and rear air intake fans. These two fans were recessed into the roof as in the prototype.

The radiator air intake grills were cut out from the air intake grills of a Roco E9 shell. A hole 13 ft long and 1.75 ft wide was cut in the body 13.25 scale feet from the cab door and 6 ft from the lower edge and a piece of grill from the E9 shell of appropriate size was MEKed in the hole.

The body panel joining strips were represented by fixing 1/32" wide "Letraline" to the body. The rear three sandbox fillers were formed by short pieces of "Letraline" set in a box shape. The forward sandbox filler on each side was made by scribing the shape into the plastic. A Calscale five chime horn was fitted to the nose and fine piano wire handrails were glued along side the nose and cab doors. A piece of brass ladder stock was used to represent the ladder on the rear end of the body. The rear marker light housings were made by diagonally cutting a piece of ABS rod and gluing the diagonally cut face to the body. The jewel was fitted to the perpendicularly cut face after painting. A piece of ABS tubing was used to represent the back-up light. A Walther's diaphragm completed the rear of the body.

The chassis, motor and trucks originally powered an Athearn SD9. The distance between the bogies is exactly right as measured with a ruler and the distance between each axle is so close to being correct for a GM12 that it cannot be easily detected even with a ruler. The sideframes of the bogies which come with the SD9 are representations of the more modern type of "flexicoil" truck. GM12 Class locomotives do not run on these type of trucks but on older style flat plate type trucks. "Sentinel" produce sideframes which are correct in appearance to the trucks which are used under GM12's. The sideframes of the Athearn trucks were ground off until the bearings and axles showed through. The Sentinel sideframes were then Araldited on. A correct size fuel tank was made up out of a couple of pieces of scrap brass and Araldited over the SD9 fuel tank. The fuel tank skirts which were originally sawn off the F7 body were glued in the appropriate place on

the side of the fuel tank. Aside from looking the part the fuel tank skirt stops the body from sliding too far down the chassis.

The paint job was done by Ed Holmann of the "Railroaders" shop in Greensborough.

Writing this article reminded me of a number of points which may help modellers who are contemplating similar projects to the one described above.

1. I have made it a rule not to use a power drill (e.g. Dremel Moto-Tool and similar devices) when drilling holes in thermoplastic polymers such as polystyrene and ABS. The heat generated by the drill bit melts these plastics and results in an ugly hole somewhat larger than the size of the drill bit. I believe it is far preferable to use a hand drill or even better a pin vise to drill holes with because the modeller has a great deal of control over the drill bit and potential mistakes can be corrected before they occur.

2. When joining pieces of plastic together using Methyl Ethyl Ketone (M.E.K.), the M.E.K. should only be applied to the inside of the join and as little as possible should be used. This solvent is quite insidious and if it leaks to the outside of the model before it evaporates it may disfigure the surface if anything touches the surface while it is still soft. I have seen models with beautiful sets of fingerprints in the side of them all because the modeller mistakenly thought that the more "glue" the better the join which resulted.

3. The SD9 chassis and trucks etc. as bought are correct in proportion for GM1, GM12, N.S.W. 42, 421, 422 and V.R. B, S and X Class locomotives.

NAMED LOCOMOTIVES OF THE AUSTRALIAN NATIONAL RAILWAYS

The articles dealing with the ANR's CL class diesel-electric locomotives which appeared in the July/August 1977 issue of A.M.R.M. prompted me to compile a list of units operated by that system which carry names.

Generally, the names chosen are those which honour prime ministers and federal transport ministers. The locomotives are either bestowed with a name at the time of entry to service or in celebration of an important railway event.

The ANR diesel locomotives which have been named to date are:

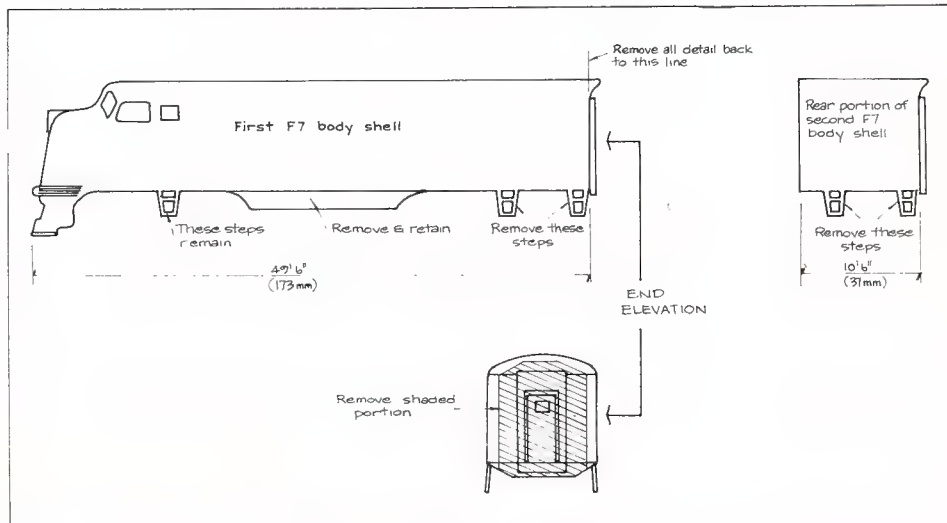
GM.1 Class:	GM. 1 — Robert Gordon Menzies
GM.12 Class:	GM.22 — Hubert Opperman
CL Class:	CL.1 — John Gorton
	CL.9 — Gough Whitlam
	CL.14 — Charlie Jones
	CL.17 — William McMahon
AL Class:	AL.18 — Malcolm Fraser
	AL.24 — Peter Nixon
NJ Class:	NJ.1 — Ben Chifley
NSU Class:	NSU.51 — George McLeay
NT Class:	NT.65 — Gordon Freeth
MDH Class:	MDH.1 — F.J. Shea
Locomotive MDH.1 has been condemned.	

The author wishes to thank the assistance provided by the Australian National Railways Commission.

Compiled by Paul Rogers.

intake grills, body panel joining strips, number boards, sand box fillers, doors, hatches, etc. were all filed off. The only details left on were the small vents on the nose, the headlight housing, the door in the front of the nose, the anticlimber and the detail on the pilot. The detail on the flat end was left intact except that the marker lights were removed. After the details had been removed the body was sanded down with 320 grade silicon carbide paper to smooth out any marks left by the file. A number of holes were now evident along the line of join between the two bodies. These holes were filled with automotive body putty and filed back when dry. The original F7 "portholes" closest to the cab door was in the correct position for a GM12, however the other two F7 "portholes" were not. These were filled with a piece of tapered ABS rod which was fitted into the hole and marked. The rod was then cut such that when refitted to the hole the piece of rod was flush with the body. This method was also used to fill the lower headlight in the nose. "Portholes" in the correct place were made by drilling 7/32" holes 29.5, 22 and 13 scale feet back from the cab door on each side. The cab doors were made by MEKing thin ABS sheet on the inside of the opening previously drilled and filed out. The window in the cab door was simply cut in the sheet before it was fixed in place. The steps under the cab door are pieces of 3/32" by 3/32" right angle ABS strip cut to the width of the cab door and MEKed in place.

The roof hatches were also made from thin ABS sheet. They were fitted from the back forward. The rear hatch, 5.5 ft by 6 ft was fixed in place 12.5 ft from the tip of the "drake's tail" at the blunt end. The next hatch, 16.25 ft by 8.25 ft was butted against the first hatch and the forward hatch, 9.5 ft by 6 ft was butted against the centre hatch. The radiator fan housing was made from two pieces of thicker ABS sheet each 10.25 ft by 3.75 ft. The underside of each of these pieces was carefully filed to fit the curve of the roof



AUTOMATIC TRAIN OPERATION

Peter Betts describes a system of automatic train operation.

Introduction

The idea of a very short point-to-point layout on which a train automatically reverses at each end is ideal for use at exhibitions as a novelty item. Such a layout was recently described by John Thomas in an AMC Newsletter and, inspired by this, such a layout has been constructed by the North Shore Railway Modellers Association (N.S.R.M.A.). They have, however, improved upon the electrical control system from that described by Thomas. It is therefore appropriate that automatic operation should be looked at in general.

Basic Layout

In its simplest form the layout should be easily portable, which suggests that it should be in one piece measuring not more than about 8 ft by 1 ft. On this should be laid a single length of track with a short station platform at each end. A low painted backdrop about 9" high is about all the scenery that is needed and a few items such as signals, buffers and people will complete the overall effect. We are thus talking about something which so far requires little more than an afternoon's work.

Electrical Control System

In its simplest form the electrical system consists of a dc supply, a relay activated reversing switch has the disadvantage of being somewhat unreliable under these circumstances and of course will work only in conjunction with a specially modified train.

Originally the N.S.R.M.A. built a purely electronic device with no relays at all, with which the train would accelerate, coast, decelerate, stop and pause before reversing and although it was made to work quite well, it required a lot of complex electronics and was reliable only with exceptionally good locos and then only with a lot of fine adjustments.

The system described in detail in this article is a semi-electronic one, without any inertia, which uses one relay, one transistor and no external switches at all. Activation of the relay is effected by the wheels of the train bridging between two sections of the track. It has the advantage of being simple and reliable and will work well without any fine adjustments, with any loco or train which are reliable themselves.

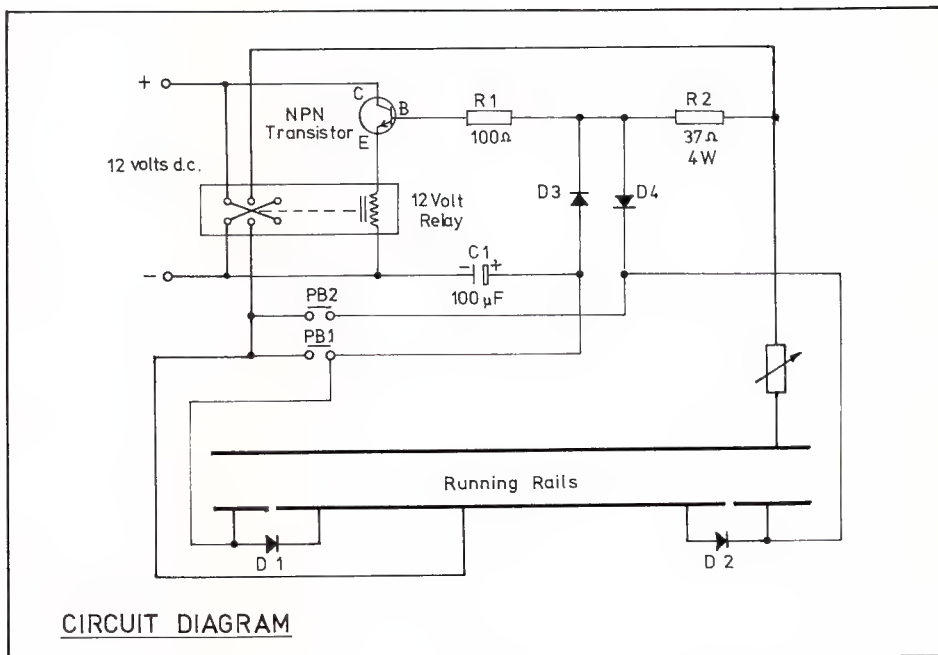
Circuit Description

In order to understand the working of the circuit, a knowledge of how an NPN type transistor works is required. A short and simplified explanation is as follows.

A transistor is in effect a voltage controller. If a positive voltage of say 10 Volts is applied to the collector, C, the voltage appearing at the emitter, E, may be anything between 0 and 10 Volts, it being equal to the voltage applied to the base, B. The current passing between C and E is governed by the load connected between E and the negative side of the supply; in this case the load is the field coil of the relay. The current passing between B and E is a small fixed fraction of the load current and is dependent on the gain of the transistor. In this application the transistor is being used merely as a switch. Either 12 Volts is applied to B through D3 or R2, in which case the voltage at E becomes 12 Volts and the transistor is switched on, or zero Volts is applied to B and the transistor is switched off. The resistor R1 serves to protect the transistor from overload. Its resistance is not critical.

Those elements of the circuit which carry the traction current are drawn on the diagram with heavy lines, while the control elements are drawn lightly. From the dc supply, the traction current first is fed through the current connections of the relay arranged as a reversing switch and then to the main section of the track. A rheostat is needed in this part of the circuit to control the train speed.

One of the rails should have isolating gaps situated about 18 inches from each end



and across each gap should be connected a diode. The polarity of these diodes should be such that the train is able to drive out of the end section but not into it.

The diodes D1 and D2 should be of sufficient rating to carry the traction current, while D3 and D4 may be virtually anything. 1 amp diodes would be suitable for all four. The transistor may be virtually any NPN transistor which is capable of carrying up to about 100 milliamps. A good cheap general purpose transistor is the 2N 3055. Any 12 volt relay with enough contacts to make up a reversing switch would be suitable, as for example a Post Office type 3000 relay.

To understand the working of the circuit, let us consider that a loco has been put on the track, the rheostat adjusted for a reasonable speed and the direction of travel is as shown on the diagram. There will be no voltage on the base of the transistor since diodes D1 and D4 prevent any positive current from flowing. Hence the transistor is switched off and no current can pass through the relay coil. When the loco reaches the rail gap, the gap will be bridged and the diode shorted out. Full voltage is then applied to the transistor base, switching it on and hence energising the relay. The polarity of the running rails is thus reversed and the loco immediately changes direction. The capacitor C1 is necessary to keep the relay energised for the short period between break and make of the reversing switch contacts. Once the reversing switch has operated, the relay will remain energised since current to the transistor base can now flow via resistor R2. When the loco reaches the other end of the track, D2 will be shorted out and the transistor base voltage reduced to zero again. The relay is thus de-energised, the polarity of the running rails reversed again and the process repeated.

During the period that the loco is shorting out D1 or D2, the full supply voltage will be across R2. This resistor therefore needs to be of sufficient rating to withstand the voltage.

In the event of the loco wheels failing to effect the necessary switching of the reversing arrangement, the train will be protected from running into the buffer stops by diode D1 or D2. The train will simply stall and it will be necessary to manually make the reversal. This can most conveniently be carried out by operating an external push button switch which is connected across the rail gap. Such switches are shown as PB1 and PB2 on the diagram.

Conclusions

It has been found that layouts running under automatic control are very popular at exhibitions. At the last exhibition held by N.S.R.M.A., such a layout as described here was in operation and it required very little attention from operators throughout the whole week end. An English type "Auto Train" (push-pull) was used on the layout, this consisting of a tank engine and a single auto coach. In order to obtain increased reliability of electrical contact, the coach was fitted with metal wheels with pick-ups and these were wired through to the loco.

On a layout with automatic operation it is necessary to avoid the use of locos such as Triang or Hornby which use 3 pole delta-wound motors, as these tend to have dead spots in them. Unless these locos are run at unrealistically high speeds, there is a good likelihood that they will stall when reversed.

There are limitless possibilities open with layouts of this type. Extra relay contacts could be used to operate signals or point motors, or the system could be incorporated into some part of a conventional layout. Additional isolating gaps which are bridged by fixed resistors could be incorporated along the length of the track to effect some sort of acceleration and deceleration. However, as with all portable layouts, this author deems that they should be as compact and simple as possible.

TRADE PRACTICES ACT 1974

The above act is now in force and contains strict regulations on advertising.

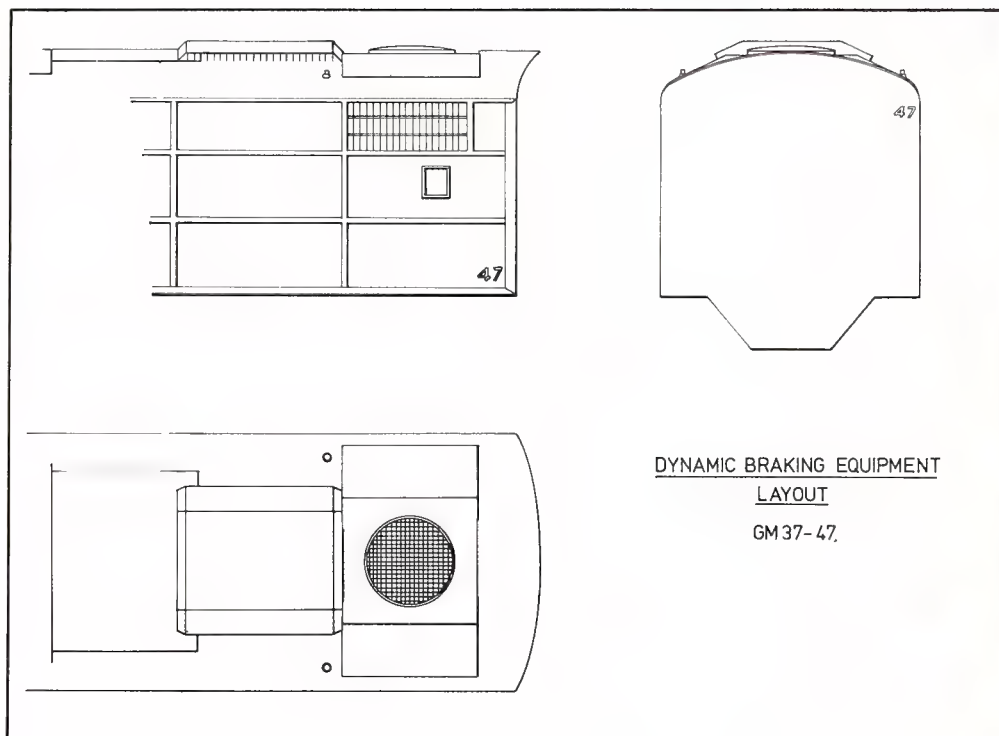
It is not possible for this company to ensure that advertisements which are published in this magazine comply with the Act and the responsibility must therefore be on the person, company or advertising agency submitting the advertisement for publication.

In case of doubt consult your lawyer.

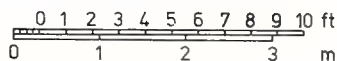
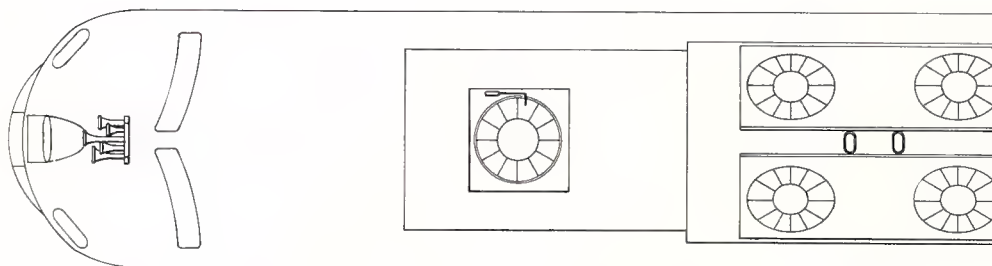
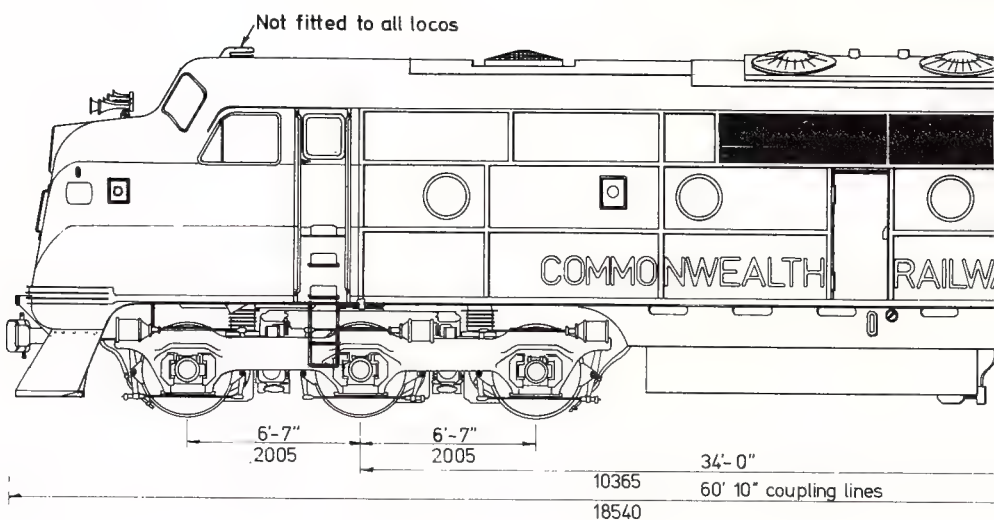
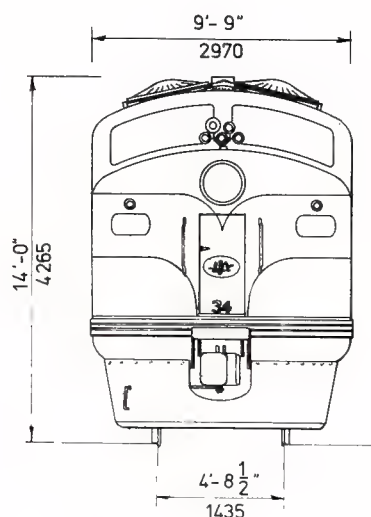
S.C.R. PUBLICATIONS

The expected publication date for the May/June 1978 issue of AMRM is the 1st June 1978.

A.N.R./C.R. 'CM12' Class Diesel Electric Locomotive



The nose of GM 45. Note how the 'Multiple Unit connection sockets' are usually hidden by hinged flaps. Photograph by Dave Flanagan.



C.R. (A.N.R.) GM12 Class
Drawn: Roger Johnson
Scale: 1:87.1 (HO)



GM 29. Photo by Roger Billett.

In 1951 the Commonwealth Railways commenced deiselisation with the introduction of the 'GM' class locomotive. The units (11 in all) were an F7 model of the Electro-Motive Division of the General Motors Corporation and built by Clyde Engineering Co. Ltd of New South Wales, which held the General Motors licence in Australia. The 'GM' units have an A1A-A1A wheel configuration and a 1500 HP motive unit. The full delivery of the 'GM' class replaced all regular steam services. (The 'GM' class will be covered more fully in a future AMRM article).

Increases in traffic demand on the Trans-Australian Railway saw a further order to Clyde Engineering for additions to the fleet. Known as the GM 12 series the units resembled the 'GM' class except that they had four portholes along the side panels, to the three port-holes of the 'GM' class. The 'GM 12' has a Co-Co wheel arrangement and a more powerful motor of 1750 HP. GM 12 and 13

were delivered in 1955, GM 14 to 16 in 1956 and GM 17 to 21 in 1957. Between 1962 and 1967 another 26 units were ordered, all having an 1800 HP prime mover. GM 22 to 26 were delivered in 1962, GM 27 to 29 in 1963, GM 30 in 1964, GM 31 to 35 in 1965, GM 36 to 39 in 1966 and GM 40 to 47 in 1967.

Over the years very little external difference occurred except for GM's 35 to 47 which were fitted with dynamic braking. This had an influence, in the last series, to alter the roofline with a hump and small intakes on the side at the rear. These variations are illustrated in the plans and the photographs.

The standard livery for the 'GM 12' is maroon and silver and was sign written 'COMMONWEALTH RAILWAYS' until 1975 when a gradual change saw 'AUSTRALIAN NATIONAL RAILWAYS' appear. All lettering is in white.

All units have but a single cab, there being no controls at the 'blunt' end, thus the stream-

lined end must always lead. When used in tandem they couple end to end.

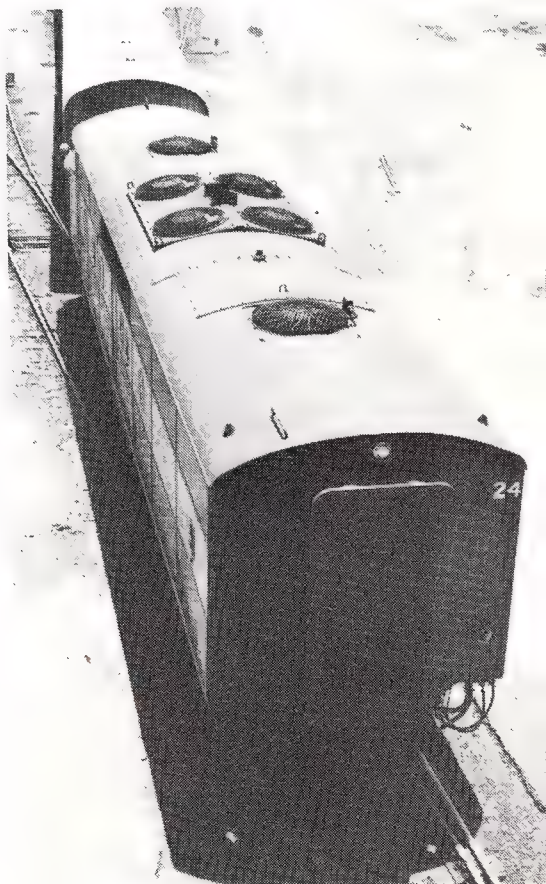
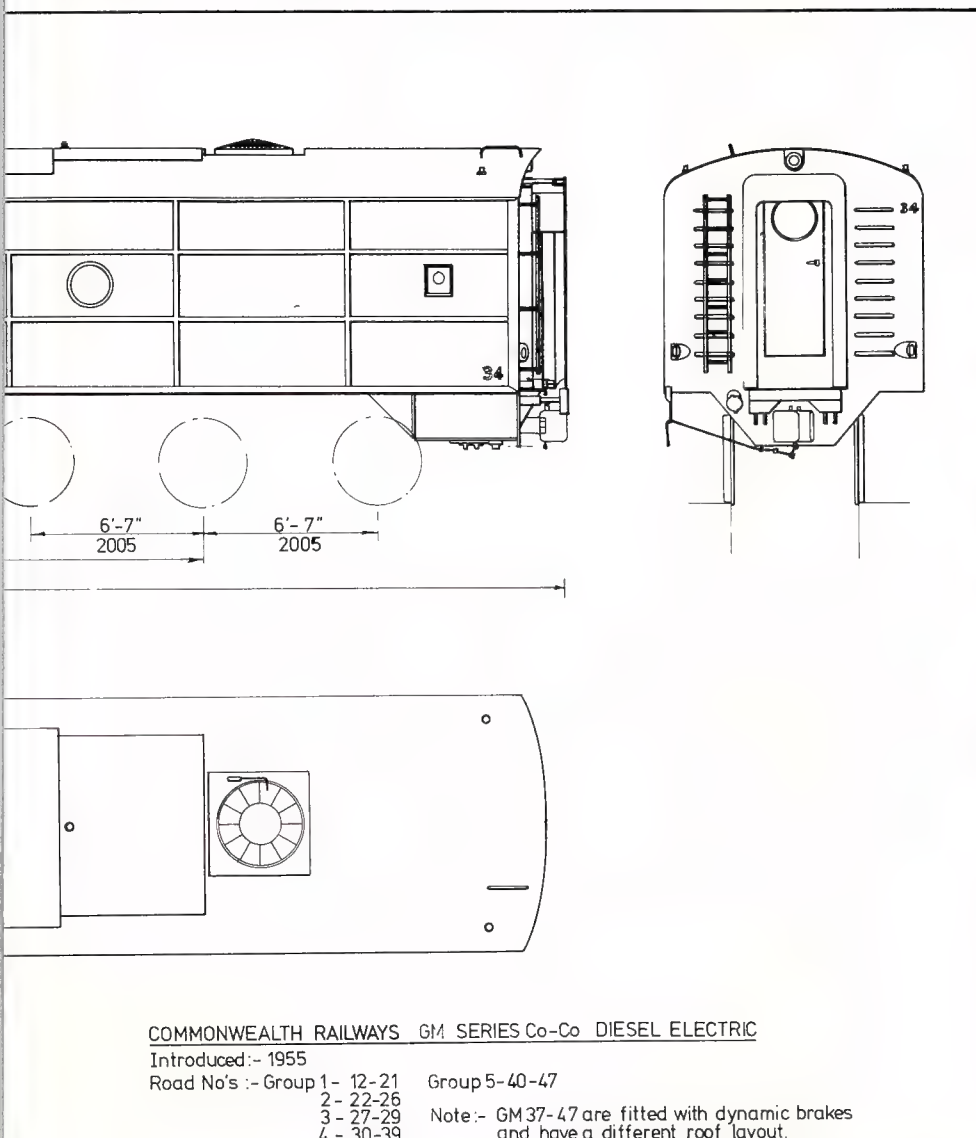
As with all diesel electric locomotives that run 'in multiple', the GM's are equipped with multiple unit connectors, whereby the un-manned locomotive can be controlled from the manned unit. The multiple unit connectors are found, usually, at the front and rear of a locomotive, however the GM series differs from the norm where GM 1 to GM 34 only have multiple unit connections at both ends. The operation in multiple of the GM's is thus effected where GM 1 to 34 can only run back to back with each other.

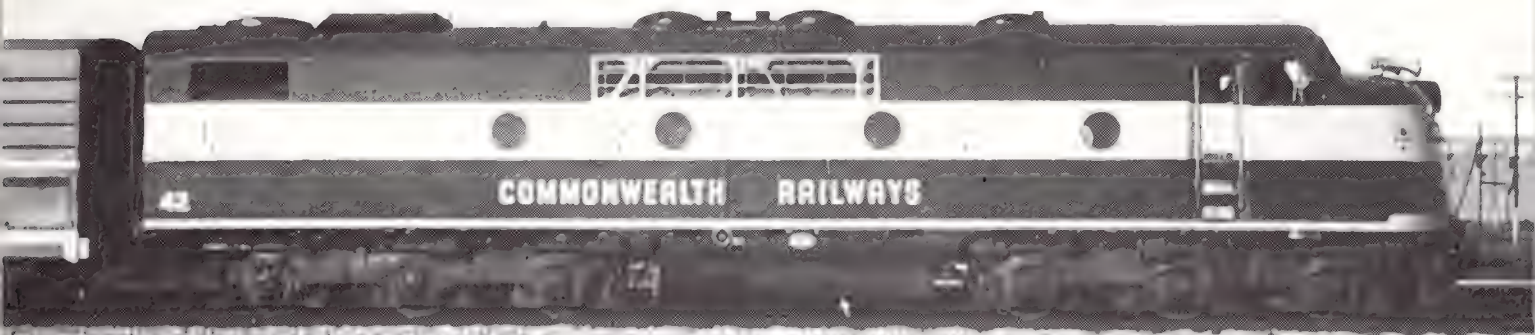
GM 22 is named 'Hubert Opperman' after the famous sportsman (bicycle) cum politician.

The normal area of operation for the GM 12 series is on the standard gauge of the Trans-Australian, mainly on goods trains, and in many cases in tandem with its own class or the 'GM 1' series, or in later years the 'CL' class. On the delivery runs all units were load tested in NSW, in some cases hauling trains to Penrith, being worked to Port Augusta via Melbourne and Adelaide, which saw a change of bogies to allow passage on the 5'3" gauge.

In 1971 a shortage of motive power in Victoria, saw GM 31, 32 and 34 on hire to the V.R., being contained to the Melbourne-Albury standard gauge link. The units were returned after at least five years service.

In 1977 NSW had a huge wheat harvest which was too large for the NSWRR to move through Sydney and Newcastle. To alleviate





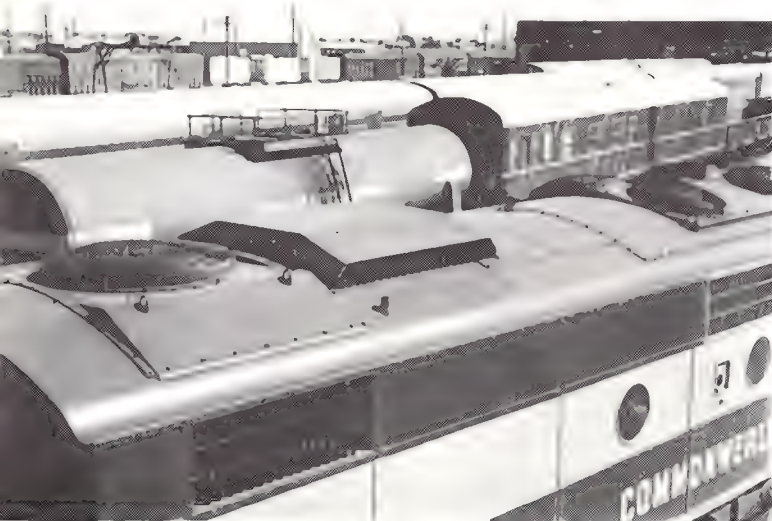
GM 42 at Port Pirie in June 1973. The photo by Phil Curnow illustrates the latter series 'GM' with the regenerative braking fan blister on the roof.



GM34 at Dynon Locomotive Depot, in March 1975. R. Gallagher photo.



GM34 and GM17 at Parkes in April 1977, awaiting a crew before joining onto a west bound goods. Photo by R. Gallagher.



The fan blister on the roof of GM 47. Photograph by Dave Flanagan.



Rear view of GM 31, VR 'S' 317 and GM 32 at Dynon loco depot. Jim Coy photo.



GM 32, GM 31, VR 'S' 317 and GM 34 at South Dynon locomotive depot in Melbourne. The 'Commonwealth' crests shown here on the nose of the locomotives were removed shortly after the arrival of the class in Victoria. Note also that GM 31 does not have the radio antenna that is evident on the roof of GM 32 and GM 34. Photo by Jim Coy.

AMRM NEWS

Compiled by Bob Gallagher and AMRM Staff.

Correspondence

Sometimes we receive some mail that requires an answer and in many cases we publish the answer in hope that it will assist other readers. This issue we oblige by answering a few question put forward by Martin Murden of Glenroy, Vic.

AMRM NEWS — Would it be possible to keep this on the one page in future please?

No doubt this question is raised due to the spreading of AMRM NEWS over 3 different pages last issue. AMRM NEWS is basically a filler type of regular article in that while it is used to keep readers informed, the size or length of it depends upon the space available. In many instances some articles do not completely fill the page and we use 'filler' type short articles to fill the space. Unfortunately we do not always have small filler type articles on hand so we spread some of the lesser important articles, in preference to having blank spaces on a page.

Could building plans be reproduced to HO scale in preference to half HO for the smaller scale puts one off the thought of using the plan?

Unfortunately it is impossible to fit all structures onto even our centre page spread and so some structure plans are reduced to half HO scale. The smaller scale is not difficult to use as one might imagine, for it is very easy to double a measurement or to use the scale bar.

It is pleasing to see AMRM print plans of vehicles of the lesser modelled railway systems. Do you intend to continue?

The overall object of AMRM is to propagate the hobby of model railways in Australia, particularly the modelling of Australian prototype. As indicated in some answers to readers letters AMRM does not consider that Australian railways consist of C38s and Beyer Peacock locomotives. While AMRM has the staff willing to prepare plans and articles on the lesser known and modelled aspects of Australian Railways, AMRM will continue to publish it, for the popularity of Australian Modelling seems to grow when AMRM is regular and on the ball.

Local Manufacturers.

The local manufacturing industry is once again under sever criticism, this time by local retailers who complain that the manufacturers either refuse to supply retailers products nor answer any enquiry from the retailer. Whilst this is not our problem nor do we desire to continually defend the local manufacturer, a few details, probably not known to retailers, may help to clear up any misconceptions.

There is no answer nor excuse for the continual refusal of local manufacturers not replying to retailers letters, even if it is to indicate the inability to supply products. Answering of mail is a simple

courtesy, no matter how long it takes and presumably all enquiries did include a S.S.A.E. for a reply.

At present in Australia there is only a few local manufacturers who advertise their products, but some of them (Workshop 5 viz T.C. Rail Models, FSM and ATM) choose to sell most or all of their products direct to the public by mail order. This is their own choice and no one has the right to deny them that choice, which in many cases puts the kits on the market at a much lower price than would be applicable if they were sold over the counter for the usual retailer mark up would have to be added.

At present the Australian model railway industry is very small and operated 'Cottage Industry' style where most manufacturing is completed at the home of the manufacturer. Many work only part time, for the return is not sufficient to give them a reasonable income. The Australian hobby just does not have the support to maintain a large number of manufacturers on a full time basis. Many have gone full time but most have failed. There are some manufacturers who cannot produce kits in sufficient number to maintain stocks at all hobby shops and in many instances they only provide a few retailers with stock. This, no doubt, seems unfair, especially to those retailers who cannot obtain the kits but, in retrospect, it seems that the present restricted availability is better than no kits at all or one shop having stock once a year, where advance planning for product sale would be impossible.

There are, however, a few manufacturers who supply most who are interested — Prototype Models 1976 supplying Prototype Model kits and PMH bogies and Locomotion who supply controllers and some ancillary items. For those retailers who desperately want to stock Australian prototype models and cannot gain any success, why not seek out a new manufacturer, for that is how it all started when Model Dockyard went to Japan for the first C38.

Reviews.

There has been some comment, by those who we feel should know better, that AMRM reviews are harsher on the prototype accuracy of an Australian outline model when compared with a model of Foreign outline. The reason should hardly need explaining for we at AMRM are more informed on Australian prototype than we are of any other prototype, in fact it could be said that AMRM exists because of Australian prototype. The problem therefore is should comment be made of the inaccuracy of a model.

The object of the REVIEW section is to preview the products on the market, primarily to supply to readers the relevant details of the product so that they, the readers, can purchase a product knowing the good and bad points. In some instances local manufacturers use our REVIEW section as a 'sounding board' to check any inaccuracies or assembly errors, and readers benefit for the same manufacturers usually rectify any problem before sale of the product. This work by AMRM staff is a service to Australian modellers and one AMRM is proud to be active with. At any time the object of AMRM is to propagate Australian prototype by debate and criticism (hopefully constructive). Any

the problem all wheat west of Parkes was railed to Port Pirie (SA) and, to overcome the motive power shortage, GM units were hired from ANR by the NSWPTC. As a rule there were usually a total of four units at a time running from Broken Hill to Parkes, being marshalled into two units, again coupled back to back (a practise not usually entertained by the NSWPTC). The twin units hauled all trains and were even used to haul the Forbes mail from Parkes to Forbes. (A full coverage of the GMs in NSW can be found in various issues of the ARHS NSW Division 'DIGEST').

ACKNOWLEDGEMENTS: The text was compiled by Bob Gallagher, the plan drawn by Roger Johnson and photographs supplied by Phil Curnow, Roger Billett, Bob Gallagher, Jim Coy and Dave Flanagan. We are grateful for the assistance given by Clyde Engineering Co.

REFERENCES: An Australian Diesel Locomotive Pocketbook by Peter Clark, published by the Australian Railway Historical Society, NSW Division.

Locomotives of the Commonwealth Railways by Ronald Fluck, Barry Marshall and John Wilson, published by the Australian Railway Historical Society, South Australian Division.

Various 1977 issues of the NSW DIGEST published by the Australian Railway Historical Society, NSW Division. Locomotives Of Australia by Leon Oberg published by A.H. & A.W. Reed.

review that is destructive is not published although the manufacturer/agent is informed of the reasons. AMRM reviewers can make mistakes and individual preferences do show up occasionally, but this does tend to liven up the text.

Regrettably these comments re the REVIEWS would have a lot more credence if they were not made by people with vested interests in some products. But what of the reader? Do readers want REVIEWS to specify inaccuracies in detail? A few letters to MAILBAG would broaden the discussion for maybe we at AMRM expect too much of products.

Hobby Shops.

Last year, the AMRM editor in his COMMENT column, had the audacity, according to some readers, to criticise hobby shop workers who showed obvious distaste to customers who sought service. The instance that raised the matter was a small one but it did happen, and yet a year later the same problem is still obvious, although not in the same shop. The incident was minor but in short the gent behind the glass case point blank refused to order in a product for which that shop was an official outlet. Naturally after he realised we knew the official agent and would not hesitate informing him of their reluctance to acquire the components they did relent and offer to get the part in, after a slight delay. This matter seems to bring to light the fact that some salesmen in hobby shops seem to forget that they need the custom of modellers for them to maintain employment, for it would be both cheaper and quicker (in the incident above) to send direct to the U.S. for the product, thus robbing the hobby shop, the Australian agent and in the long run the Australian economy of a few dollars. Fortunately as indicated, this problem seems to be restricted to the larger shops, (especially the big departmental stores) and the smaller owner/salesmen shops are predominant in the hobby. Still, salesmen should remember that we model railroaders are their bread and butter and unless their approach is like honey they might find their bread dry-up.

HELPI! Photo wanted.

At present we have on file a scale drawing of the Victorian Railways WW125 workmans wagon. Unfortunately the photographs to illustrate the plan have been lost and we need some more to enable the plan to be published in AMRM. When last sighted WW125 was in the Geelong area. Can any reader from the area help?

Back Issues.

A cleanup at AMRM has revealed a number of back issues that have not been available for some time. The available issues are listed in the BACK ISSUE advert in this issue.

Readers Award 1977.

As these notes are being typed we only have a few nominations from readers for the article in AMRM that helped them most in 1977. Due to this encouraging response from readers we will keep the

Continued on page 40

WATER TANKS OF THE V.R.

In the May/June 1977 article on NSW water tankers, mention was made of the wide variety of water carrying vehicles seen on that State's railways. Victoria, too, has a wide variety of water tankers. The best known are the WT's, about which Charlie Huggard has written the H0 construction article.

The WT and typical usage.

WT's were used most extensively in the steam days, for cartage of water to loco depots in 'dry' or 'hard water' districts. They saw busy times on the Mildura line, which passes through 200 miles of Mallee country in Vic-

toria's north-west. During droughts, there would be rakes of a dozen or more marshalled into trains for loco and domestic (i.e. VR departmental residences) purposes. WT's carry 9000 litres (2000 gallons). There are about 100 still in service.

On the Goroke branch of the Hamilton-Horsham line, the train engine required a WT behind it for the outward journey, for two reasons. Firstly, the trown water at Goroke was so hopelessly hard that it made loco water tubes look like the inside of Jenolan Caves, so the loco had to bring its own return trip supply: secondly, locos such as J's and N's were so long

that they had to be uncoupled from their tenders for turning. Unfortunately, some tenders did not have their own brake, and would roll away if left untended. Never mind, the WT had a handbrake: so the procedure was to uncouple tender and WT, apply WT brake, turn loco, turn tender and WT, shuffle, re-couple loco. One of the few compensations was that the outlet cock of the WT was at the right height for the tender water inlet.

Over the years, some WT's have had worn-out chassis replaced by chassis from scrapped 'I' trucks. The result looks like it was built by a modeller, as the 'I' chassis is noticeably longer than the tank.

Steam Loco Tenders as Water Carriers.

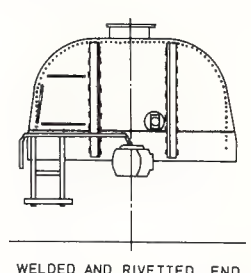
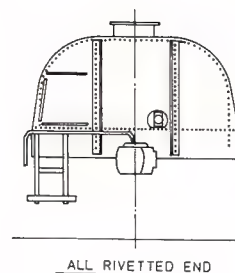
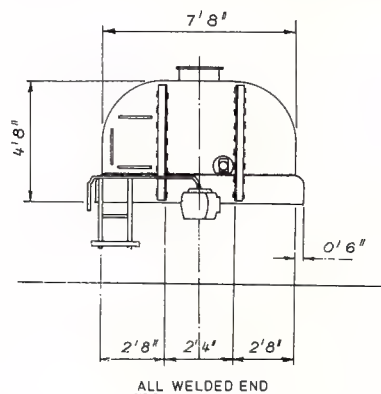
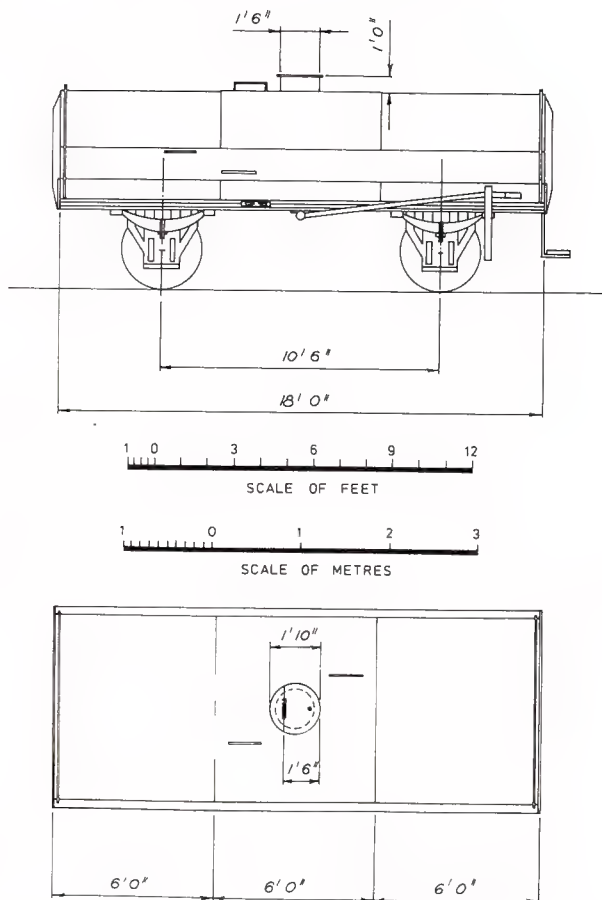
The earliest water tankers on the VR consisted of old loco tenders. WT wagons did not appear until around the turn of the century. The VR still use loco tenders for water cartage. The current mode consists of pairs of J or K tenders coupled bunker-to-bunker, and signwritten "WATER TANK". They have to be coupled bunker-to-bunker, as the bunker end couplings are a simple draw bar device, incompatible with the normal auto (knuckle) coupler. Three such pairs are operated from Mildura onto the Nowingi branch, for stock watering purposes. They are painted the usual VR 'red zinc chromate', as are 'I' trucks and most other VR freight stock. Several other pairs are stationed around the State, for fire-fighting purposes. These tenders are not used for domestic water, so don't make the mistake of spotting one on a siding next to the railway house on your layout!

Other Water Carriers.

The VR have 8 'Domestic Water' wagons coded DW, in the number range 227-234, and they consist of 'IA' wagons (open 4-



Typical 'welded-end' WT, at Bendigo in 1975. The 'DW' stands for Domestic Water. Note the patchwork quilt of weld repairs on an otherwise rivetted side.

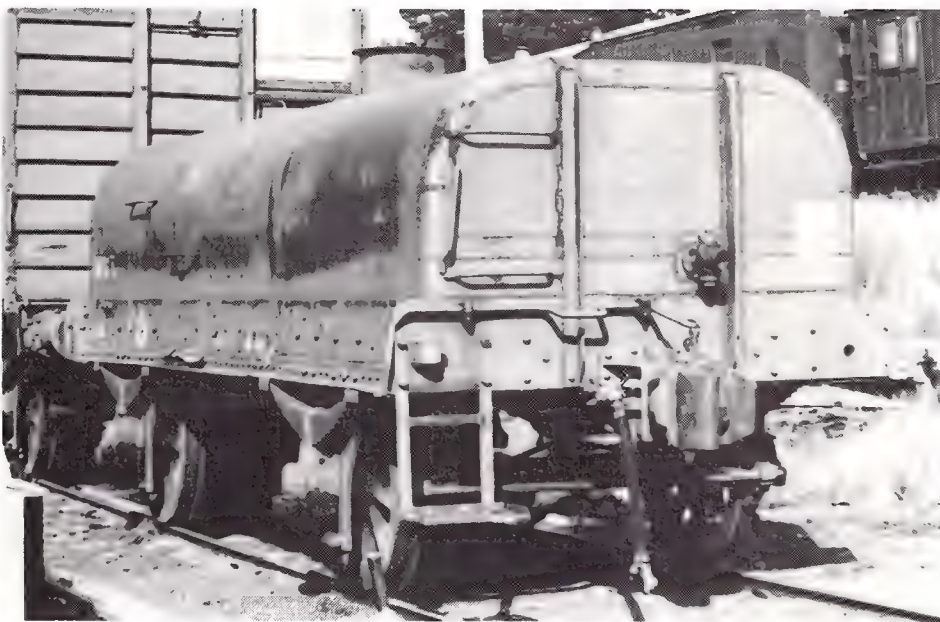


VICRAIL 'WT' CLASS WATER TANK 10' 6" WHEELBASE

Plan prepared from information supplied by
Peter Vincent and Flinders Model Railway Society
End variations drawn from photographs

Drawn : R. Wrigglesworth

February 1977



An 'all welded body' WT (No. 111) snapped at Woodend in 1975. It is likely that it received this body after being involved in an accident. Neatly flanging the top over the ends is not easy for the modeller.



View across the top of a WT. Note also the evidence of buffers from pre-auto-coupler days. The shunter's step utilises 4 of the buffer mounting holes.

wheelers) with the doors removed, and 2000 gallon water tanks dropped in.

Last Resort Water Carriers.

According to official VR instructions, 'when acute shortage of water renders the use of additional water trucks necessary, certain GY or IZ trucks are altered temporarily for water transport'. This is achieved by dropping a canvas liner into the wagon. (Note. IZ wagons are now coded as RY.)

General Notes.

WT's, like the paired tenders, are based at strategic locations for fire fighting purposes. When taken into any use, however, they are balanced up daily between centres. For examples, if 6 are despatched to Ouyen from Maryborough, 6 will be expected back in Maryborough the next day; not necessarily the same 6, though.

Common uses (other than those described) for the various VR water tankers include supply to private dwellings, hotels (!), chaff mills, sawmills, and quarries.

Also WT's are marshalled into wayside goods trains for filling lineside water storages. These include 44 gallon drums on timber bridges for fire-extinguishing, and also buried drums alongside tracks for track men to use on sleeper fires. You could make timetable operation interesting by calling for such 'top-up' activities by a wayside goods five minutes before the Southern Aurora was due through.

Compiled by Ian Weickhardt with help from Peter Vincent and Des Jowett.



Typical 'water carrier from a loco tender'. This vehicle is bunker-to-bunker with another old tender. The other tender has its lettering on the far side. These combinations are painted the usual VR 'brick red', rather than black. Photographed at Mildura in August 1976, by Peter Vincent.

NO JUICE



This unusual working occurred when the power (electricity) was turned off to allow maintenance on the Carlingford branch, on Sunday July 10th, 1977. Dennis Toohey supplied the photo story that shows 4498 heading a consist of two double deck electric cars. Perhaps these photos serve to illustrate that virtually nothing is impossible or unusual in railway operation, provided that the items of equipment are in use at the same point in time.

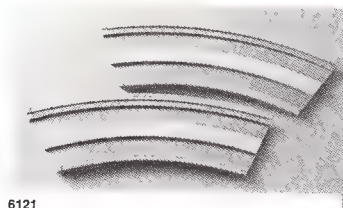
ARNOLD rapido

N 
Gauge

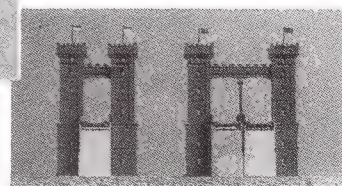


AMERICAN STEAM LOCOMOTIVES AND ROLLING STOCK

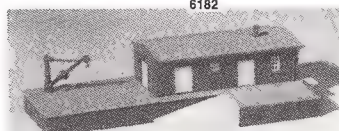
- | | |
|--|---------|
| 2260 Old Time 0-6-0 Loco with tender W&A | \$45.00 |
| 2261 Old Time 0-6-0 Loco with tender UP | \$45.00 |
| 3611 Old Time Shorty Combine | |
| Western & Atlantic | \$ 7.95 |
| 3612 Old Time Shorty Coach | |
| Western & Atlantic | \$ 7.95 |
| 3613 Old Time Shorty Combine, Union Pacific .. | \$ 7.95 |
| 3614 Old Time Shorty Coach, Union Pacific .. | \$ 7.95 |



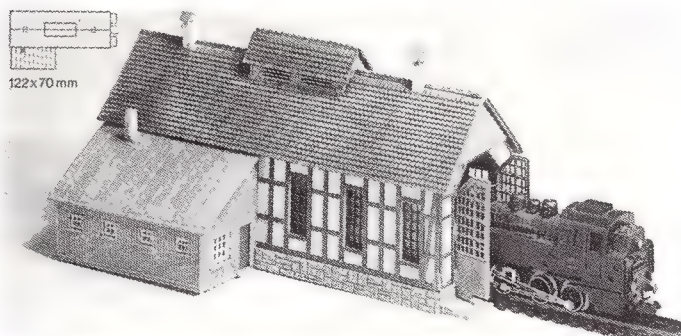
6121



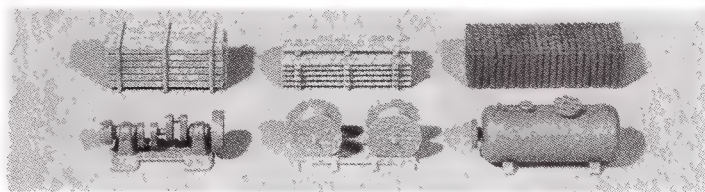
6182



6440

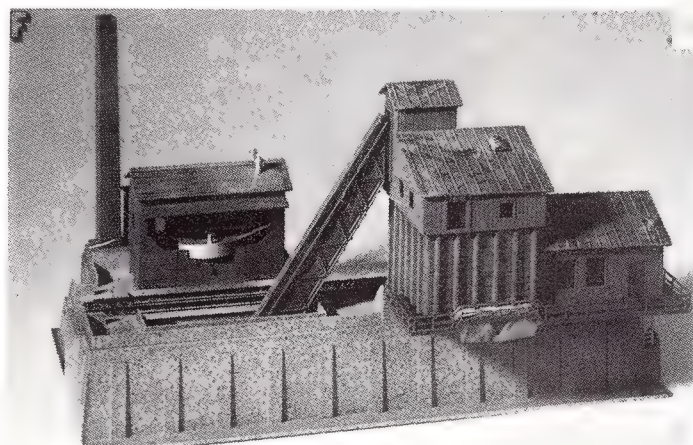


6336



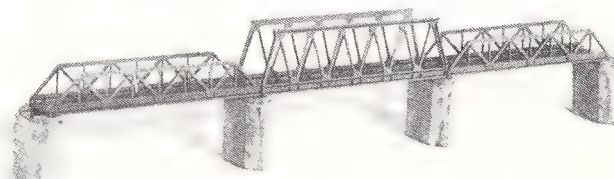
6490

- | | |
|--|---------|
| 6490 Six Assorted Freight Loads | \$3.25 |
| 6821 Operating Factory | \$59.95 |
| 6826 Unloading Ramp for use with special
wagons | \$7.95 |



6821

- | | |
|---|---------|
| 6121 Curved Bridge Deck for double track,
2 sections for 45° angle | \$4.75 |
| 6170 Three Span Girder Bridge with piers
approximately 390mm long | \$5.95 |
| 6182 Bridge Portals, old time brick | \$10.75 |
| 6190 Steel Arch Bridge | \$10.25 |
| 6221 Piers for sloping ramp | \$5.50 |
| 6300 Crossing Boards & Water Crane | \$4.95 |
| 6440 Goods Shed with ramp & Crane | \$7.50 |



- | | |
|--|--------|
| 6310 Water Tower with pump house | \$5.50 |
| 6336 Old Time Engine Shed, single stall .. | \$6.50 |

FOR FULL LISTING OF ARNOLD RAPIDO
LINES SEE AMC LISTS SERIES "A"

★ ★ ★ ★ ★ from good hobby shops everywhere

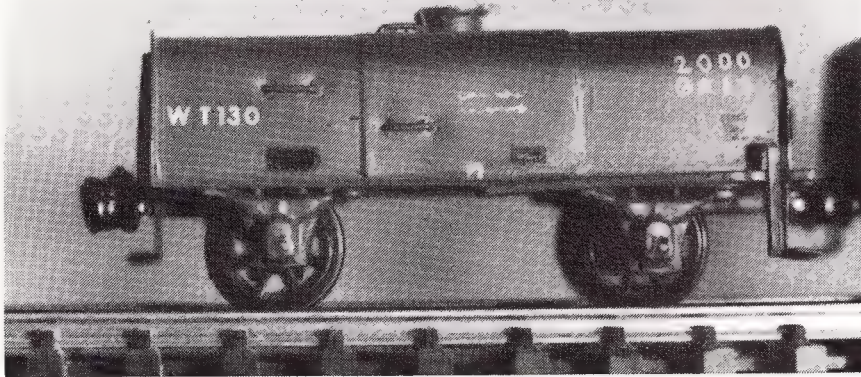
FOR TRADE AND GENERAL ENQUIRIES:-

AUSTRALIAN MODEL CRAFT CO., 577 Dean St., Albury, N.S.W. 2640 (P.O. Box 118)

Prices in this advertisement are
recommended prices only and there
is no obligation for dealers to
comply with the recommendation.

BUILD A V.R. WATER TANK

by Charlie Huggard.



Most, if not all, Australian railways have water tank cars. They are used for all kinds of tasks, including water supply to drought stricken towns, and as water vehicles on fire fighting trains. In steam days, they were marshalled behind the tender on runs into dry country. If you should contemplate building a water tanker, you will find helpful ideas in these paragraphs, no matter which State you model for. Your first task will be to get a photo or two of your pet prototype, and if you can locate a prototype in a siding you can measure it up and note the detail you wish to model. This article shows how to build a V.R. WT wagon in H0 scale. I made my model mainly from 10 thou. sheet brass, except where indicated otherwise.

The body of the tank is made up from a rectangle of brass, 56mm by 62mm. It is essential that the body be truly square. Locate the exact centre of the rectangle, pop mark with a punch, and drill a 1/16" hole. If you intend to make more than one wagon, it is well worth the effort to produce a pattern. On the pattern one should include the drill holes for the hand rails (grab-irons). Having drilled the holes, flange the 62 mm long sides by 1/16", using a bender, if possible. To get the shape of the tank place a 1/4" bar in the vice with about 12 cm (approx. 4 inches) protruding. Over this bar, shape the tank body, constantly checking against the end drawings. See diag. 1. Note the position of the flanges. When satisfied, cut the 56mm x 23mm centre wrapper from 5 thou. brass and solder in place. Cut the pieces for the ends a little over-size and solder the body to them. Cut and file the ends to the correct

shape, noting the slope of the sides. The 1/16" side flanges should be thinned down to suit the end profile. The end braces are made from 1/32" angle with the taper filed into place.

The filler hatch is built up from a slice of 3/16" tube and a scrap of brass. The hatch fits over the 1/16" hole in the centre of the tank, but first solder a 10 BA bolt into the tube. The lid is filed to shape and the hinges and latch soldered in place. The whole assembly is then bolted in place on the top of the tank. Grab-irons should then be positioned, and soldered from the inside. Make and solder on the shunters' steps and handbrake.

Chassis

The floor is made by bending 1/8" flanges on the sides of a rectangle of brass 62mm by 31mm. This floor must fit neatly into the bottom of the tank. You can now solder on the axle guards. See diag. 2.

To make inside bearings for 12mm wheels, (suitable adjustments must be made for wheels of other diameters), stack solder 4 pieces of brass and shape the stack to 12mm by 7mm. Measure 8mm from one end and centre pop. Drill a hole according to the axle size, and slot out. Separate the components of the stack, and solder then to the centre sill at the point corresponding to the axle centres. The centre sill is made by flanging an 1/8" on each side of a brass rectangle measuring 17.5mm (11/16") by 62mm. Place the wheels in the slots and set them on level track. Correct any wobble that may be present. Remove the wheels, and solder copper wire keepers to the centre sill. Replace the wheels and bend the keepers back over the wheels. See diag. 3.

Solder the sill in place on the floor. The springs on the axle guards prevent the floor from disappearing into the body of the tank.

Recheck that everything fits together properly. Disassemble, degrease and paint. When dry, letter as per photographs. When you have reassembled your tanker, fit the couplers, and proudly place in service.

Chassis Ideas for Other 4-Wheelers

To make a chassis for rolling stock other than the WT, an adjustment needs to be made in the size of the floor. The rectangle of brass must be 34mm wide (1-11/32") by the length required. Flange 1/16" at the edge. (Not the one 34mm long.) Then an 1/8" reversed to give the illusion of the channel section side sill. See diag. 4. The 1/16" flange must be reduced to 1/32". Solder to the floor a 5/32" wide end-sill. The axle guards, centre sill and the inside bearings are the same as in the WT.

WEATHERING BY DULUX.

A couple of years ago some guy called Bret was putting up a brewery in Chillingham, the interchange point of my Pacific Valley Lines and the Galugabar North Western. The character they had painting the brewery was a real artist I tell you; here was this brand new brewery designed by those famous Campbell people of California, and it was being painted like it was put up near a century ago.

My natural curiosity aroused, I went over to find out more about what was going on. It turned out that it was all a gimmick of the advertising department. They thought the paint scheme would help with the image of a well matured rop of the sweet light amber. Fair enough, but I was still intrigued about how it was done, particularly that loading dock and the corrugated iron roof.

The answer was very simple really, Dulux Same Day Antique Foam Toner.

The loading dock was first painted any flat light grey — such as Floquil's SP lettering grey or reefer grey. When that was dry a mix of equal parts of Dulux FT1 black and FT2 dark brown foam toner was made up and scratched on with an old toothbrush or coarse paintbrush until the desired effect was attained. This is very easy material to work with, just add more if you want it or if you've added too much — wipe off.

For the roofing the corrugated iron was first painted with the same light grey base and then Dulux FT3, red oxide foam toner, was applied. This compound at first appears quite pink but it dulls and darkens with age. If you are not happy with the red oxide straight then mix a little dark brown with it until you obtain the desired effect.

These foam toners are pressure packs and are used similar to pressure shaving foams. They mix quite readily in any receptacle. While wet they move quite easily on painted surfaces, but once dried they are very stable.

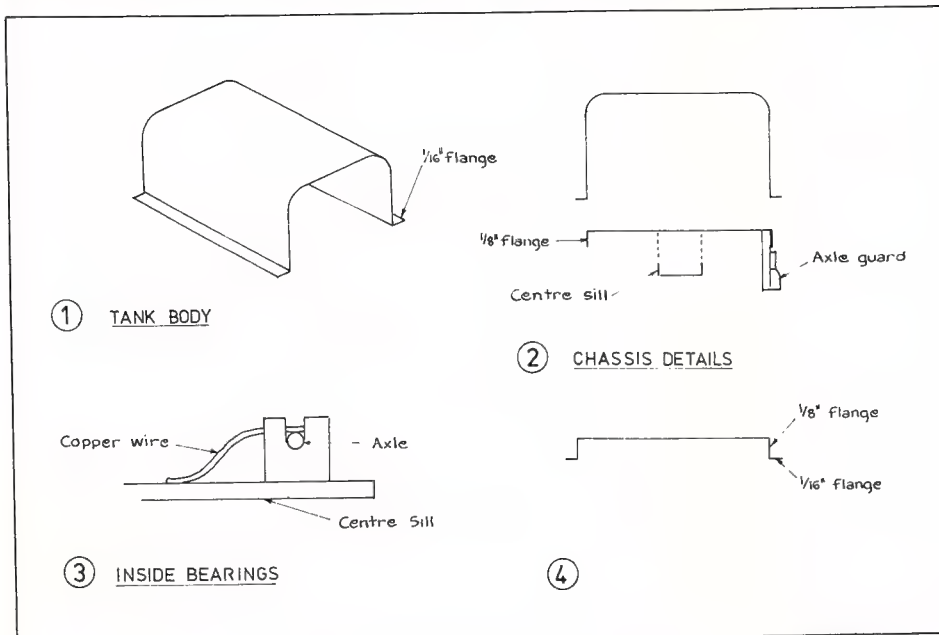
I haven't checked the latest prices of the toners but that wouldn't mean a lot these days. I find them a valuable tool still, and they have good shelf-storage life. I'm still using the original cans I bought two years ago — no half used bottle of Floquil paint ever lasted that long.

Phil Morrow

Correction

Last issue AMRM credited the authorship of AUSTRALIA 'N'7 to Derek Clark, when it should have been Terry Clark. We sincerely apologise to Terry for the mistake.

The Editor.



PROGRAMMING OPERATIONS

An attempt to get some form of prototype realism into operations was made by adopting a pre-metric weight conversion factor of one ounce equals six tons. Thus all model equipment was, as far as circumstances permitted, weighted on that basis to approximate the respective prototype either at its tare, or its semi or fully loaded weight as discussed later on.

Each loco was tested for drawbar pull on various gradients to assess the permissible maximum loads for each for all situations, from which a "load table" was set out and issued to each yardmaster. As an example the 38 Class can haul 200 tons up the 1-28 grade ranging to 320 tons on the 1-40. The prototype is rated to handle 325 tons on a 1 in 40 ascent.

Thus when making up a passenger "up" train at Midplains for Central the consist should be restricted to 4/ROA (Railways of Australia) cars and guards van, or 4/12-wheeler type cars (MBE, MFE etc.) plus MHO, totalling around 220 tons. On freight running the 38 may handle a drag of, say, BCH (39 tons), TRC (33), VLX (34), LLV (36), RU and 3/S (16 each) with a OHG van (24) totalling about 220 tons.

After plodding up the 1-28 on a curve to reach Suburton from which there are no appreciable grades an additional 150 tons can be attached there for Central.

The 5-feet passing loops at stations allow the passenger trains just mentioned, with loco, to stand within the fouling points. On the vehicle/weight calculation one example will clarify any queries from purists when it is stated that the BCH type comes from the Tenshodo shops at 6½ oz, which, under our 1 oz = 6 tons conversion, gives an empty (model) weight of 39 tons, equivalent to the prototype whose tare is 19½ tons and a payload of 19½ tons. Actually the prototype BCH ranges from its tare to 62 tons all up as originally bogied. I don't try to be too precise and for our purposes the model weight of each code is somewhere between the prototypes' tare and maximum permissible loads. While our load tables are arbitrary for all wagons of a particular code, they allow freights to be built up to the assigned loco's tested haulage capacity for the section, provided no crossing meets are scheduled en-route.

This sort of controlled operation adds a lot more interest to proceedings but it requires operators to make an effort to work to the rule book. It also inhibits non-sensical shunting — petrol wagons to stock sidings for example — and breaks away from the "play trains" image that most tyros approach a session at the controls of a layout.

Long trains possible

As indicated not all passenger and freight trains are limited to the 5-feet passing clearance length, and where a priority train holds the main throughout and can be accommodated at its destination, the former can be built up to 8 or more cars and vans, and freights to 20 bogie vehicles. The main from Midplains to Port is almost all falling grade and even the longest trains do not require double-heading or heavy power.

Generally, however, to enjoy coping with the problems set by assigned locos, passing loop clearances, load factors, marshalling order for set-outs etc. experience points to sticking to the normal and "ideal" compositions to avoid foul-ups, excessive drag on couplers (10 BCH's totalling about 4 pounds, roughly driven, plays hell with couplers), and blockage of sidings etc.

Freight wagons and guards vans each carry an actual prototype number. These numbers were chosen to relate to the last two figures of the layout's stock register numbers from 1 to 99. One purpose for this is to reduce notations for marshalling and composition lists when observing the principal type of programmed operation. Under that form of working a wagon such as BCH 11025 is entered simply as 25 or, when easier recognition is desirable, as BCH 25. Passenger stock and locomotives bear actual prototype numbers also but in no ordained order.

It is interesting to follow the fortunes of some of the prototype 12-wheeler passenger

stock since I built and numbered them in 1943. Some have been scrapped, codings changed and doorways and windows modified.

Freight trains from the nine industrial sidings at Central have the drops for Suburton, the first station, coupled next to the engine to simplify shunting there, otherwise the rest of the vehicles are coupled indiscriminately for

remarshalling at Midplains for either the Coast or Mountain divisions or for drops at Midplains.

At the latter will already be "down" destination wagons standing on sidings ex either division for the other, or for an "up" movement, plus others originating at Midplains.



Facilities at Central roundhouse nestle below a road traffic overpass. A corner of the 8-stall roundhouse is seen behind the 32 loco about to be coaled. The 38 and a 50 await their turn. In the bottom right of picture is the down end of Orchardville and portal of tunnel 11.

The 55-class on shunting duties at Central coupled to a WAGR. WGX. The two BWH hopper cars behind it are facsimiles to prototype and are a legacy of the former layout using Tenshodo equipment of American designs.





Part of Central coach shed and industries occupies the foreground and at left behind are some of the six levels of tracks on the 180 degree curves at south end. The Summit shunter, a 19-class awaits duties at the coal mine.

The term "program" is used here rather than "timetable" which is not strictly correct. Generally there are not enough operators with experience of the layout available at the one time to observe running by the clock so the scaled down converted alarm time-piece is still to go into service.

The same usually happened on the SMR's HO layout where the timetables and designated shunting movements were mainly honoured in the spirit.

On the NSWGR new recruits at the control boards quickly become confused by the array of point and other keys and this slows down local movements and eventually ties up total working.

Modes of program working

As first planned, a full program required nine persons at all control positions. The one time this occurred resembled a football final, as a result boards were modified or amalgamated. Now effective operation is done by six on an "ideal" run or by five, even four, for full but restricted sessions.

Accordingly about four forms of total layout running are in use based on the number and the experience of operators on a specific

occasion. The ideal form follows a set program requiring six or five on control boards viz. (1) Central plus Central loco, (2) Suburton, (3) Midplains main, (4) Midplains yard, (5) Lower Range-Summit, and (6) Port. If five, the Suburton man also handles Lower Range-Summit and works like demented.

All trains are scheduled and numbered and the specific wagons/carriages in a formation and the locos are nominated by their numbers and types. This information is contained on a set of cards held by each operator concerning his particular participation in each movement. Each additionally has a master card briefly listing all scheduled trains in order of attention, while the individual cards describe the duties to be performed. The set of cards are in the colour of the respective stations, discussed later on.

A typical individual card held by operator at Central contains headings reading: Direction. Number. Type. Destination. Sequence. Work. Under these headings and in the same order, the train and work is set out thus — Down. 103. Pick-up. Midplains. 4. Assemble (on) track 3 from sidings: wagons 70, 25, 37, 42, 66, 81, Van 30, Loco 5085.

The experienced operator will know that "down" means away from Central (obvious anyway), that odd numbers are "down" trains, that it is to be a freight as those trains are numbered in the hundred series, that being a pick-up it will have wagons to set out or attach at the intermediate station, Suburton, in which case the drops should be marshalled next to the loco, and that track 3 is a departure road. The figures 70, 25, 37 etc. refer to the last two numerals in the number on a wagon, the code of such wagons, and therefore the siding location being familiar from frequent past working. In this case wagon 70 is MCV 1170, a louver standing at the cool store siding, to be detached at Suburton.

At Suburton that operator's card for this train will read: Down. 103. Pick-up. Midplains. 6 (sixth train for consecutive attention). Drop 70, collect 17, 27. Hold on loop to cross "up" 16. Depart when accepted. This operator learns from these instructions that he has to deal with an "up" passenger before offering 103 so he then refers to his next card in sequence for directions respecting "up" 16. When this train is cleared he then offers 103 to Midplains and upon acceptance drives it out of

his section.

The second form of operation used is similar but designed to give less experienced controllers more time for yard work plus extra details for rollingstock identification. The code of the wagon would be included and the siding where it is would be mentioned. Less trains are scheduled to avoid confusion. An elaborated alternative to this form spells it out for new chums and only the code of the wagon is stated so that, in collecting a BCW from the stockyards, the nearest one is coupled on to reduce shunting. Any appropriate road engine is attached. Suburton cuts however have to be correctly marshalled. Still less trains are scheduled.

Coloured "waybills" aid marshalling

The fourth method used is called the "random" type; it is often employed, such as when having a run after a lot of maintenance, for testing results of work when likely failures of points and so on would disrupt a tight program. Very good too, when visiting VIP's and relatives demand to become temporary commissioners. Under this method the destination of each wagon is denoted by a coloured waybill in the form of a small mapping pin which is inserted into a minute hole on roofs or sides in a corner of respective wagons. A train is marshalled from whatever wagons are about in any order at terminal stations and a pin, selected at random, placed on each car. Train running may or may not be programmed. This leisure form of operation has its attractions as the same drops and pick ups are rarely duplicated. This indiscriminate waybiling creates problems at some stations where too many cars for the available siding accommodation, or types incompatible with the traffic needs at certain places, can make the game ridiculous. It does dispense with the inconvenience of cards, and the pins make sight-marshalling from a distant control board (as at Midplains) a lot easier than squinting at the midget scale-size wagon numbers before sorting.

The station colour code is in Table 1.

It will have been noticed that to an extent the names of the stations suggest the type of freight traffic originating or received, giving purpose to the main types of freight wagons employed. For example the silos at Harveston accept wheat from growers, those at ZCentral receive it for local milling while those at Port

TABLE 1

Station	Colour	Main Activities	Main wagon codes involved
Central	Red	City commercial	All
Suburton	Brown	Industrial	All, except bulk wheat
Midplains	White	Big country junction	All
Orchardville	Orange	Citrus and other fruits	Mainly reefers and louvres
Harveston	Yellow	Wheat and grains	Mainly bulk wheat codes
Port	Blue	Main State port	All
Lower Range	Green	Dairy and logging	All
Summit	Pink	General	All, except bulk wheat etc.
Coal Range	Black	Underground mines	Hoppers and open wagons
Quakers Q.	Silver	Bluemetal etc.	Mainly open types

receive and hold it for overseas shipment. So, apart from odd consignments elsewhere, the utilisation of the BWH, RU and, when necessary K and S wagons, loaded or empty is principally between the three places mentioned which have silos. Midplains generates livestock etc., Black Range coal, Lower Range logging and dairy produce, Orchardville fruit and so on. This predictable movement of specific codes of vehicle obviously nominates the siting of each in shunting work.

It will also be seen that colours in some cases indicate the class of traffic indigenous to the locality (i.e. Harveston — wheat — yellow). Those colours are used for the program cards at the related stations. All the clerical data such as wiring diagrams of each station etc., etc., are carried in folders so coloured.

Realistic passenger compositions

Another attempt to emulate real practice in a condensed form is sometimes introduced regarding marshalling passenger trains at Central. Ordinarily the ROA set is stabled at Port, the old end-loading LAB set at Midplains together with the LFX, BJ and HR cars used for Mountain and Coast locals, while the suburban electric set and the 12-wheelers, the FS, MHO and EHO cars are stowed at Central.

So, at Central, the exercise is to marshal trains according to traffic requirements. Observing the prototype seating accommodation provided by the respective cars available i.e. MBE 42 seats, MFE 64 and so on, the traffic for a particular train is arrived

at by the selection of a card at random from a prepared pack, each bearing a different feasible traffic demand. If, for example, ticket pre-sales shown on the selected card require seats for 52 first-class and 154 economy class, one make-up might be one MBE car (42 first), one MCE (18 first and 48 economy), one RFX (62 economy) and one MFE (64 economy) thus providing for 60 first and 174 economy class, an excess of 8 and 20 respectively for late or wayside travellers. Other compositions for the same numbers of travellers could be MBE, MCE, and if no buffet was needed, 1 MFE and 1 FS or 2 FS's. For overnight mails with sleeping accommodation, use 1 or 2 TAM's, TBC and MFE or FS, etc. The overnight is sometimes built up with an extra car, an MCE, for a drop at Midplains where those passengers transfer to the locals mentioned or that extra car from Central is attached to the local on the division not being worked by the overnight. All this, as said, gives operation a new dimension and adds immeasurably to the enjoyment of a well-conceived program.

Ordinarily on fully-staffed days, with only the one man at Central responsible for all the work — train despatch, arrival, make-up and break-up, snooting in and out of industrial sidings and loco depot chores, there's no opportunity for the passenger car marshalling bit which overtaxes that controller's capabilities, therefore it isn't programmed as yet. The main purpose in view when building the various codes of the 12-wheelers was for such performance to complement the usual freight shunting activity at the terminals.

AMRM NEWS.

Continued from page 33

competition open for another two months. Who knows, we may double the entries, three more would do it.

2½" Gauge Association.

We have on hand some data of the National 2½" Gauge Association (U.K.) sent in by a reader. The data is in the form of a number of association newsletters and a listing of suitable plans for locomotives and rolling stock. Any interested reader may contact the secretary P. R. Wiese, 6 Halliwell Rd. Redcliffe Bay, Portshied, Bristol. U.K.

Commercial News.

Readers of AMRM Market Place will no doubt be aware that the U.S. made Taig micro lathe is now available in Australia.

It is the first week of February and we have just had the opportunity of perusing Hornby's 1978 catalogue. As this issue was not able to contain the results of this year's Toy Fair, we can at least inform you of Hornby's offerings. The full Toy Fair report will feature in the May/June issue.

The catalogue did not have any insert relevant to Australian outline, it having just arrived direct from England. The agent's representative also did not know of any proposals in this field. The catalogue, therefore, was purely of English prototype. It shows two new locos, the King class and the class 29 diesel electric, the latter being in either of the BR colours. The Black 5 will be released in LMS livery; the pannier will be released in London Transport red; a freelance 0-4-0 Great Western loco will accompany the shorty cars which will be painted in Great Western; the 0-6-0 Jinties will be structurally updated and include brake hangers and shoes; a travelling post office car of scale prototype will be released; additional cars in the pre-nationalisation era will be available; a completely new range of

station and lineside buildings will be released and these appear to be far from the older toy-like appearance. In some aspects they look very much Australianish. The catalogue appears to show that all locos which have the basic 6 wheeled coupled arrangement will now have the centre drivers flanged, but this will have to be confirmed at the Toy Fair. Watch out for a comprehensive report in the next issue.

We have had the opportunity to view samples of the TT gauge products of Berliner TT — Bahren. The 1:120 scale models are made in East Germany and are marketed as part of the Piko range of model railway equipment.

The samples seen represent various European prototypes and include 2-8-0 and 4-6-2 steam locomotives, Bo-Bo and Co-Co and 0-6-0 diesels, three electric locomotives and passenger and freight rollingstock. The models are injection moulded plastic and well detailed and expect to be priced a little above N gauge prices for equivalent items. Set track is available using pressed section rail.

These models will hopefully assist to revive interest in TT gauge as a viable scale for modelling and should also assist modellers in HO N3½ scale to obtain suitable mechanisms, etc.

DATA SHEETS have released another HO scale plan, the subject being the K(1353) class locomotive, later known as the D55. The plan depicts the loco as delivered, with tapered boiler. Full details next issue.

The N.S.W.R. rail curve and gradient diagram book is once again available from the N.S.W.P.T.C. Archives (York St. Sydney) or the enthusiast bookshops. Price \$7.00.

Just as this issue of AMRM went to press we received some details of products from PECO that were displayed at the 1978 Nuremberg Toy Fair. The highlight of the new releases, which will be covered in some detail next issue, would have to be the PECO Magni-Magic auto coupler for the OO/HO gauge. The coupler resembles a knuckle coupler and is operated by a permanent magnet between the rails. Further details as a sample comes to hand.

EXHIBITIONS

BRISBANE — Queensland, April 29 to May 1, 1978 at the Police and Citizens Youth Club, Lang Park. Open Sat 1000 — 2200, Sun 1200 — 2200, Mon 1000 — 1800. Admission \$1/40c. Organised by Radio 4BC and the Queensland Branch of the Australian Model Railway Association.

BLACKTOWN — N.S.W. June 3, 4 & 5, 1978. Open Sat. 0900 — 1800, Sun. 1000 — 1800, Mon. 0900 — 1700. Admission 60c/30c. Organised by the Prospect Model Railway Club. Details: 623 1855.

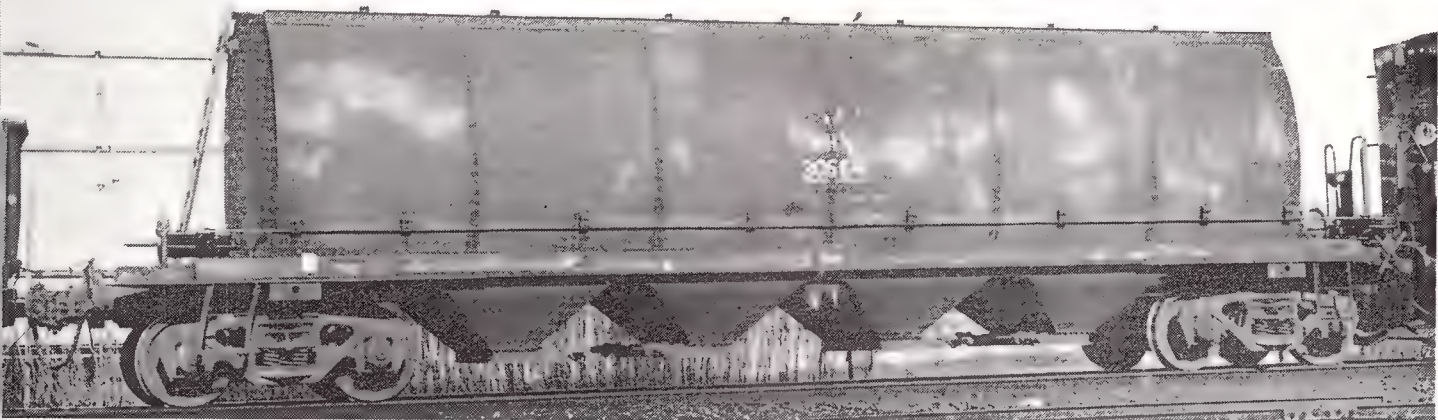
BURWOOD — N.S.W. June 3, 4 & 5 at the Burwood Public School, Railway Pde., Burwood. Open Sat 1000 — 1900, Sun 1000 — 1800, Mon 1000 — 1700. Admission 70c/30c. Organised by the Sydney N Gauge Model Railway Club.

YAGOONA — N.S.W. September 1st to 3rd at Yagoona Lions Hall, Hume Highway, Yagoona. Open Fri 1900 — 2200, Sat 1000 — 2200, Sun 1100 — 1700. Admission 50c/20c. Organised by the Yagoona Lions Club and the Yagoona Model Railway Club.

ENQUIRY CORNER

David Neale of 5 Naree Rd. Frenchs Forest NSW 2086 is secretary of the newly formed sub-branch of the Hornby Railway Collectors Association (Australia), which caters for both 0 and Dublo. Any reader interested is welcome to contact David for details. Ian Barnes of Kyogle is keen to meet with any railway modellers in his neck of the NSW woods. Ian can be contacted via the Forestry Office, Kyogle 2474.

The advertising deadline for the May/June 1978 issue of the Australian MODEL RAILWAY Magazine is the 21st April 1978. Please be early.



WHX 30664 at Mascot. Bob Gallagher photo.

Aluminium has been employed for many items of New South Wales rolling stock. Coaching stock examples include electric and diesel multiple unit rail cars built between 1937 and 1972. Many items of freight rolling stock have been constructed of this material; one of the earliest series which could be quoted is the group of MLV type bogie louvre vans built by Chullora Workshops during 1947/48. However, it was not until the 1960s that aluminium was chosen on a large scale basis for goods vehicles.

The benefits to be gained from the use of aluminium include a more favourable capacity-to-tare ratio in comparison with steel vehicles, a higher payload per train and greater fuel economy for the locomotives employed. There are many vehicles which can benefit from aluminium construction. The hopper discharge wagon is one type.

During the period following the Second World War the New South Wales Government Railways accumulated a large fleet of hopper discharge wagons for grain traffic. This fleet consisted mainly of BWH type bogie vehicles and RU type four wheel units. There were also some CU type four wheel wagons which were a variant of the RU code. The haulage of grain is one of the most important tasks performed by the New South Wales system and, during the 1960s, additional vehicles were sought for these duties.

The contract placed with A.E. Goodwin Limited, Auburn, New South Wales for 150 aluminium grain hopper wagons yielded WH units 30401 to 30550 inclusive between December 1964 and October 1967. Their success prompted the placement of an order with Tulloch Limited, Rhodes, New South Wales for 118 wagons of a similar design. These vehicles, coded WHX, were numbered 30551



Compare the differences between the WHX and the WH class illustrated above. The heavier side beams and the hopper area differs greatly with the WHX and yet, as this article goes to press, there are reports that the WHX class are being recoded to the WH class, removing the bogie exchange capabilities. The mix-up of vehicles will be a headache for modellers in the future. N.S.W.P.T.C. photo.

to 30668 inclusively and entered service between July 1968 and January 1969. A repeat order placed with Tulloch produced a further 100 WHX cars. These carried road numbers 30669 to 30768 inclusive and entered traffic between August 1971 and March 1973.

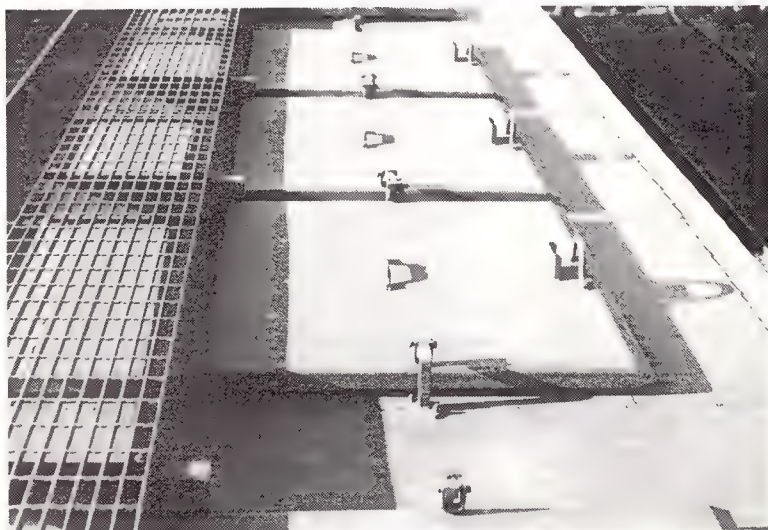
The construction of the WHX follows that of the earlier WH unit. The body is a self-supporting structure formed from aluminium sections. This material is used for the curved sides, ends, roof, internal transverse bulkheads and the side sills. The headstocks and drawgear assemblies are made from steel components.

The WHX, like its predecessor, is fitted with heavy duty automatic couplers and, in accordance with modern New South Wales practice, is bufferless. Both WH and WHX wagons are finished in unpainted condition.

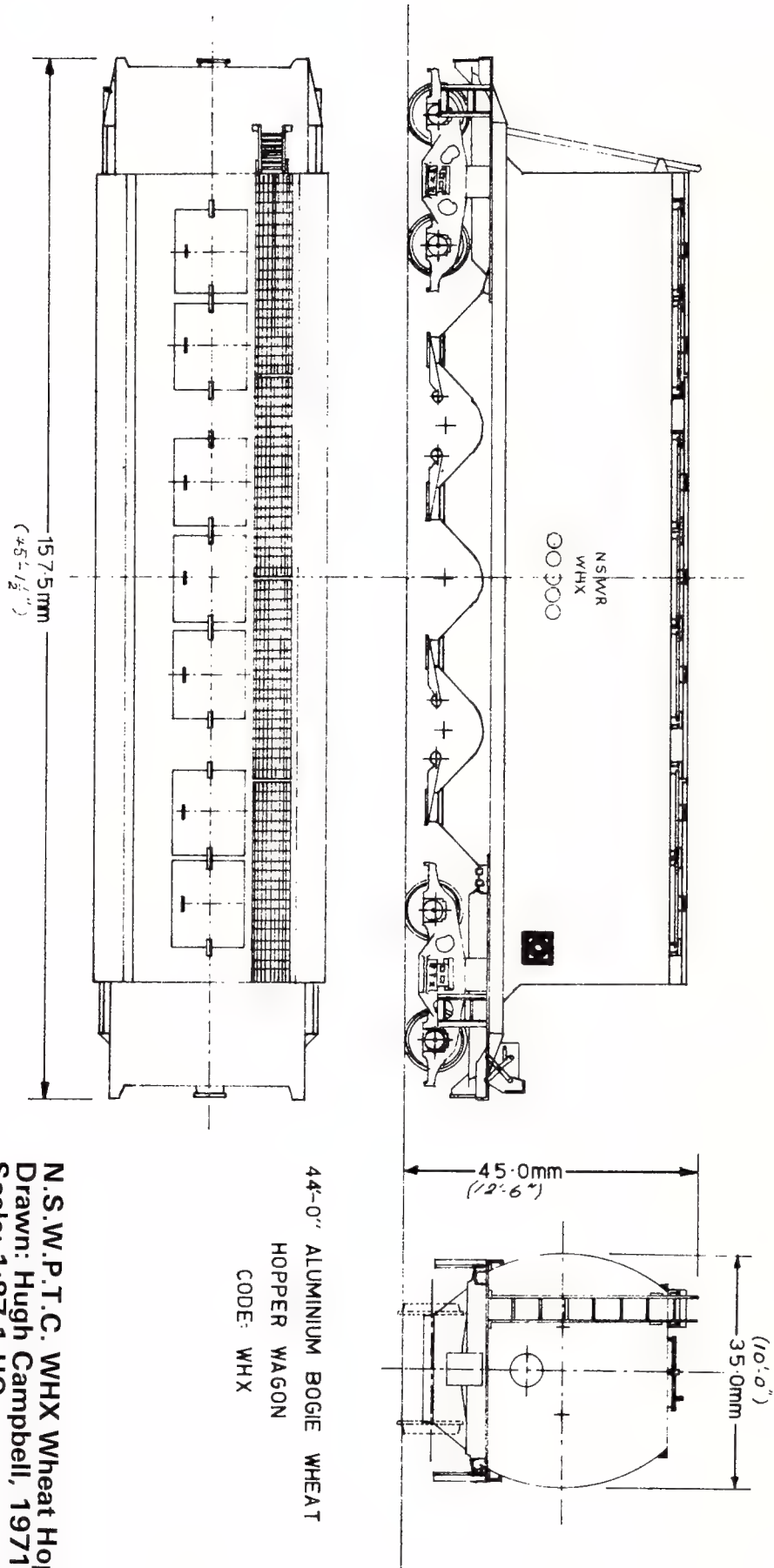
The capacity of the WHX wagon was originally set at a nominal level of 57 tonnes which was reduced to 55 tonnes during 1975 for administrative purposes. The tare is rated at approximately 19 tonnes. For comparison, a steel bogie grain hopper car of the BWH or FWH type carries a nominal payload of 42 tonnes with a tare rating of around 20 tonnes.



WHX 30768 MANILDRA Flour/Starch unit. Graham Ball photo.

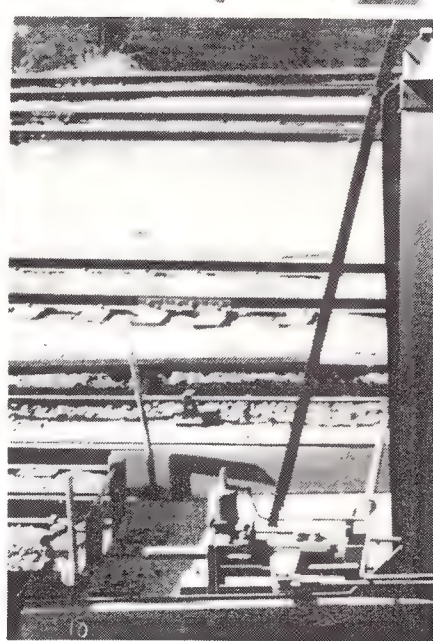
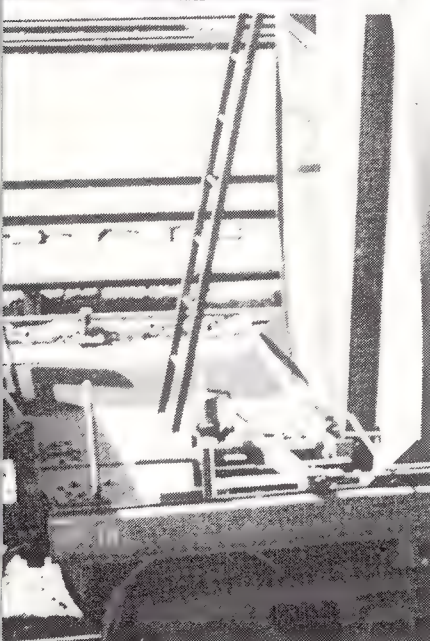
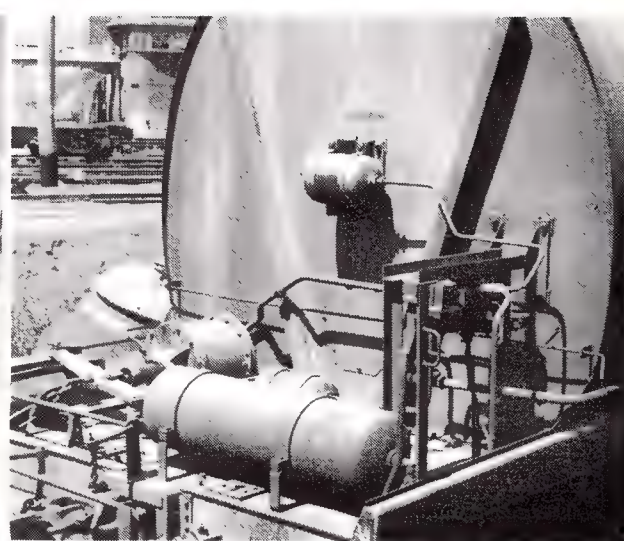
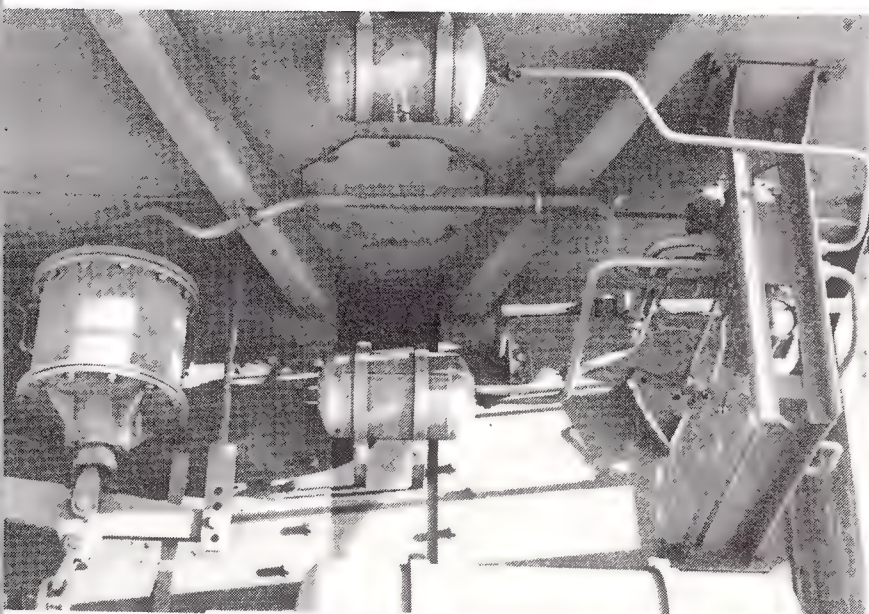


The roof hatches slide under the cat-walk.



44'-0" ALUMINIUM BOGIE WHEAT
HOPPER WAGON
CODE: WHX

N.S.W.P.T.C. WHX Wheat Hopper
Drawn: Hugh Campbell, 1971
Scale: 1:87.1 HO



The photographs illustrate the layout of the brake gear.

The capacity-to-tare ratio of the aluminium vehicle is approximately 3:1 whereas for a comparable steel wagon it is slightly more than 2:1.

The WHX cars are pooled with the other types of grain hopper vehicles; viz. BWH, FWH, WH, WTY and RU codes. Extensive use of unit trains for grain movements occurs in New South Wales and it is a common sight to see a mixture of codes in these consists. Certain WHX units have been allocated to "captive" workings and one example of these operations involves round trips between Auburn and Manildra. The vehicles concerned are lettered "MANILDRA FLOUR MILLS — PHONE 649.1444" on one side and "MANILDRA STARCHES — PHONE 649.1444" on the other. There are several vehicles in this category, including 30685, 30756, 30759 and 30768.

Several years ago, the New South Wales Government Railways searched for a logo to replace the State Coat-of-Arms which was then used as its corporate identity on locomotives and rolling stock. The replacement symbol was the "R" logo. This was used extensively on freight vehicles built during the late 1960s and early 1970s. A number of WHX wagons had this logo and, although the writer has not been able to ascertain the quantity involved, it is known that the vehicles so treated included 30676, 30702, 30732, 30746, 30748 and 30758.

The final series of WHX wagons was delivered towards the end of the existence of the New South Wales Government Railways and WHX.30768 entered service only a few weeks before the formation of the Public Transport Commission. It should be noted that 2 WHX cars, 30764 and 30765, did not enter traffic until March 1973.

The development of the aluminium bodied grain hopper has been progressed to embrace the WTY vehicle, of which 500 are currently entering service. Tenders have been called for a further 500 cars of this type.

Paul Rogers.

Acknowledgements:

Mr. J. Forsyth
PTC of NSW Archives
"New South Wales Digest" (various issues)
Author's Notes

N.B. The information relating to those WHX cars fitted with the "Manildra" legend and "R" logos was compiled from notes made by the author during 1974. It is conceivable that other wagons may exist which possess these features. Readers who may be able to add to these lists are urged to submit their findings to A.M.R.M. so that future research may be enhanced.

RECOLLECTIONS

Many of us know of the 'Vintage Fanciers' (Alias Tinplate Collectors) within the ranks of the model railway fraternity. There have already been articles in AMRM about the enchanting collections owned by some of these people.

Seeing some of these models brings back some very happy childhood memories. Also, it makes me wonder whether we should preserve some of our own early efforts at modelling. I believe that we should, even if we hide them away from other people's eyes if we are ashamed of them. Later on, they can be brought out of hiding and compared with (hopefully) better examples of our work. Alternatively, if you have some commercially made models on the layout that are being superseded by the output of your modelling program, put the commercial models away in a safe place. In years to come they will be good for some nostalgia and some highly embroidered 'remember when?' bull sessions. For example, 'Remember when this Triang B class pulled 50 wagons up the 1 in 30?!!'

Ian Weickhardt

MAILBAG

Dear Sir,

Being aware of my particular interest in the affairs and equipment of the Western Pacific Railroad in the USA, one of your regular readers has sent me his copy of the September/October, 1977 issue of your publication in view of the article at pp 32/33 thereof dealing with the General Motors F7 model diesel-electric locomotive.

I have found the article to be most interesting, and now wish to comment upon several aspects of its content that may be of interest to you and your readers.

It is mentioned that among others of Australian locomotives, the GM1 class of ANR is an adaptation of the F7 model and that the GM12 class of ANR and the 42 class of the NSW are adaptations of the F9 model but with respect I suggest that this is stretching the point a bit much. Whereas the F7 was of B-B wheel arrangement with an overall length of 50'8", the GM1 is of A1A-A1A wheel arrangement with an overall length of 58'8" and a carbody of quite different appearance from that of the F7.

As to the local GM12 and 42 classes, they are both of C-C wheel arrangement with six traction motors and overall lengths of 58'8" and 58'0", respectively, whereas the F9 was of B-B wheel arrangement with four traction motors and an overall length of 50'8". Also, the carbody of the two Australian classes is markedly different from that of the F9.

Regarding the Western Pacific Railroad roster numbers of the two F7s that were purchased by the Mt Newman Mining Railway, I am able to advise that WP 917A and 923A were those that were involved in the sale, and that they were numbered 5450/5451 by their new owners.

Finally, I draw your attention to the fact that in the line drawings of the F7 model locomotive appearing at the foot of p.32 of the magazine, the overall length should be shown as 50'8" rather than as 50'0".

W. D. Freeman,
East Lindfield, 2070.

We at AMRM take pride in the accuracy of our articles and cannot let a challenge, such as Mr Freeman has offered, go unanswered. The research for the following reply came from Leon Oberg's *Locomotives of Australia*, Peter Clark's *An Australian Diesel Locomotive Pocket Book* and the Clyde Engineering Company who hold the EMD license in Australia.

The quotation from John Bevan's article that is under challenge is:-

"The F7 locomotives are powered by the G.M. 5678 V-16 diesel engine. It is for Australian modellers to note that some of the earliest Australian diesel locomotives are the F7 adapted to suit local conditions. These locomotives are the ANR (then CR) GM1 class and the VR 'B' class. The latter ANR GM12, VR S and NSW 42 are essentially F9s".

As the ANR (CR) GM1 class were the first of the F7 style EMD (GM) units in Australia all comparisons will be between the F7 and GM1 class. To start with, Australian loading gauges and rail are smaller than that used in the United States and, so, any locomotive based on a US diesel would be narrower, smaller in height and usually have the weight of the locomotive either lessened (via light frames which would be suspect to metal fatigue) or the body lengthened to distribute the weight over a bigger area.

Mr Freeman draws attention to the fact that the F7 has B-B wheel arrangement while the GM1 has A1A-A1A arrangement, but both units have four electric drive motors each and by coincidence they are all EMD D27 motors; both classes have EMD D12 generators and both have EMD 567B, V-16 two-stroke engines which had an output of 1500 hp at 800 rpm. A further confirmation is that the Clyde classification (at the time) for the GM1 class was A7, and that the nose cones for the GM1 class were imported as two-piece metal pressings direct from EMD in the US.

AMRM checked with Clyde Engineering Company, who, incidentally, are assisting AMRM prepare accurate scale diagrams of the Clyde built locos. Part of the answer from Clyde is as follows:

"The F7 was the basis for the design for the GM and 42 class. The axle load was, of course, reduced to Australian limits; this meant redesign to accommodate the lightening effect.

EMD domestic units are bigger and heavier with weights of 160 to 190 tonne and height to 15'7" and width 10'6".

Australian locos are confined basically to 90 to 130 tonne, height 14' and 9'9" width.

It would be impossible to transfer an EMD domestic loco directly to Australia without redesign of some sorts."

May we suggest that the only thing that was stretched was the loco body to accommodate the weight distribution. As time went by, and more powerful power plants became available, the Clyde built diesels, while continuing to have the F7 style nose, were built with more powerful prime movers. The VR B class had a similar diesel motor to the F7/GM1, while the GM12/42/S classes had the EMD 567C, V-16 motor which developed 1750 hp at 835 rpm although this did vary with a different style

blower. The NSW 421 class had a similar motor and power output as the latter GM12 class but the generator and drive motors varied to the other classes. Finally came the ANR CL which was not bigger all round when compared with the other units but it also had a F9 (or E8) nose which differed in contour to the F7 style unit. An interesting point is that a few of the earlier units which were built with F7 style nose cones now carry the latter F9 nose cone, for the units were damaged in accidents and, when repaired by Clyde Engineering Company, a F9 style nose cone was added. Do any readers know the locos concerned?

For the modeller, the differences between classes is in body detail, and this is being illustrated in various Prototype plans in AMRM. Soon to come is the VR S class, the NSWPTC 421 class and this issue should have the ANR (CR) GM12 class. With the advent of the Hornby S (GM12) class model there will not doubt be some customising by modellers, who hopefully will share their efforts with AMRM readers.

Finally Mr Freeman was correct in pointing out the error in the F7 plan, for the length of the unit is 50'8".

Bob Gallagher

Dear Sir,

I refer to the article titled "Horse Boxes of the TGR", in the January/February 1978 edition of the AMRM.

For the interest of readers there is an excellent photograph of H34 (Plate 186) in the book "Railroading in Tasmania, 1830-1962" by Thomas C. T. Cooley, (L. G. Shea, Government Printer, Tasmania).

Of further interest, as I can only presume it to be a further derivative of the H Class, is Plate 187 showing an HG Class wagon — HG3. The caption describes HG3 as a cattle and sheep wagon in which there are two floors, one of which can be raised to form two compartments for sheep transport. Again the photo provides good detail for modelling purposes.

The book in general is an excellent repository of photos of Tasmanian Government Railway locomotives and rolling stock up to 1962 and is therefore recommended to modellers of the TGR if they are not already aware of its existence.

I. W. Fathers,
West Ryde

Readers may be interested to know that AMRM staff are finalising a feature on TGR stockwagons, to be published in a future AMRM.

Dear Sir,

I was quite interested to read about future articles concerning passenger cars and operation in issues 86 and 87, and I noted the request for articles from other state systems.

I would like to point out that in issues 39 and 40 of the AMRM there are two articles by John Beckhaus concerning the 'Lander' cars of the Queensland Government Railways. In issue 42 of the magazine there is an article, again by John Beckhaus, that describes the Indian Pacific.

Would it be possible to have these articles reprinted so that other modellers, who do not have the issues concerned, may enjoy these splendid articles too?

Bradley Hinton,
Wahroonga, 2076

As issues 30, 40 and 42 are still available from AMRM back issue department it would seem pointless repeating them. Sorry. (Ed.)

Dear Sir,

I thoroughly enjoy the magazine, although I'm sorry to see the Ed in MAILBAG in the September/October 1977 issue laying down the law about what people should run on their layouts. Whose layout is it anyway? L. Batten seems to be enjoying himself doing it his way and I can only agree that something cheaper than brass would be very acceptable. Something cheaper than \$70 would be even more acceptable, but if that's what it takes to ensure further developments along the lines of the Z18 and Z25 I will not complain (as long as its NSW prototype). And if I want to run C38's on a 9'x12' layout I ruddy well will, Ed!

Fred Douth,
Thailand

Good for you. Despite the hard line indicated in the reply to L. Batten we did not, nor will we, aim our comments at dictating as to what readers should do. If we had such majestic powers we would enter the political scene and make some money in the effort. We do however believe that many of the AMRM readers are unaware of locomotive usage in NSW and will continue to detail articles showing this side of the hobby. Maybe AMRM readers do not want to either read about nor purchase the smaller locomotive of the NSW system, and that being the case we will need a strong indication from the readers, which can be shown in letters to the editor, the more we receive, the better the opportunity to assess the situation. On the pricing of locomotive kits, due to the smallness of the market we cannot expect many to cost under \$100, for many hours have to be spent preparing the patterns that the kits are made from, and remember that the production costs are on Australian wages.

Bob Gallagher

Dear Sir,

I must complement the person responsible for the photos of SAR's 965 on its side (November/December, 1977, Page 30).

This is undoubtedly an ingenious way of obtaining photographs of underbody detail, provided that one has the strength to push the subject over in the first place. I do hope though that he righted it when finished!

Ronald Sovertip,
The Glen, NSW 2653

Dear Sir,

Congratulations on producing a really good magazine. I used to get it during 1972, 1973 but found little in it to interest me. It has improved out of sight and is now back on my list of "regulars". I particularly liked the articles on the "C" and "930" class locos. I think it's a really good idea to have several articles on the same subject in the one issue. Keep up the good work.

Mrs Nita Spicer

Dear Sir,

The November/December issue of Model Railway (at least somebody noticed! Ed.) contained a letter from Leigh Tingle of Figtree, NSW. He would like to insert some kind of resistance in the 12 volt DC line to run the lamps on a lower current to preserve their life.

Why not forget about using a resistor and DC and use the lights on AC from a separate transformer? I purchased one from Dick Smith Electronics (Cat No M2155) Primary 240 AC, tapped secondaries 6.3, 7.5, 8.5, 9.5, 12.6 and 15.0 volts AC at 1 amp. Take yours on what voltage you want.

If you want DC rectify the current by using four (4) silicon rectifier diodes in a full wave circuit. Diodes 1N4001 or EM4005 will pass current up to 1 amp.

Trusting this information will be helpful to you.

Norris Ramsay,
Sans Souci, NSW 2219

OIL TANKS in use on the N.S.W.P.T.C.

For some time now modellers wishing to model NSW oil tankers have had a choice of either going out and measuring a unit so that a model could be scratchbuilt or converting one of the many commercially available models to look like the local units. There has been a saying that "NSW has so many oil tankers that any model must be close to one of the prototype." Unfortunately, information is now available to disprove that statement. It now appears that all (most) NSW oil tankers are bigger than the US units that are represented on the model market.

The information that is now available is the wagon diagrams, which have been released through the NSWPTC Archives, after they had remained classified for many years. Those who have had the foresight to make these available to the public are to be congratulated.

Now, before readers race off to purchase the diagrams, a word or two should be heeded for there are over 130 plans and it seems that they do not cover all units in service. Many conversions have not been diagrammatically recorded, but the evidence from the diagrams has allowed some research to finalise with a commonsense answer. At one stage Mobil had a number of 4100 and 5000 gallon 4 wheel tankers but then put them onto bogie underframes of varying lengths and to complicate the system more, they were renumbered, but still retained the last two numbers of their original numbers. These are but some not covered by the diagrams.

Because of the incident mentioned above it is, in many cases, easier to spot the vehicle to be modelled, photograph and record the underframe detail and then seek the relevant plan from PTC Archives. Alternatively, the complete range of plans could be purchased, at a cost.

In the near future AMRM will be publishing data on some of the oil tankers with the emphasis on old 4 wheel and short bogie stock. However, there is little likelihood that the full range could ever be covered by this or any other publication. So if a reader wants to be original and have a model of his own he will have to do a little research, the end result always being a sense of achievement.

Bob Gallagher

REVIEWS

Illawarra Mountain Railway by O. F. Jacobson. Published by the Illawarra Historical Society. Sample supplied by Locomotion, Jennifer Street, Thirroul, NSW 2515. Price: \$1.45.

This 64 page, A5 size, booklet is printed on glossy paper and covers the history of the railway line that links the NSW south coast with the NSW main southern line. The author has dug up the many debates that preceded the building of the line and covers the construction, operation of both passenger and goods trains and completes the book with a small section on accidents. A coverage of the locomotive classes used on the line is also included.

The text is illustrated with relevant maps and track diagrams as well as many historic photographs, most of good quality. A very interesting section covers the Dombarton crossing facilities, here the grade is too steep for a standard crossing loop and so a system of head in and dead end sidings was evolved. The range of photographs cover the construction period, early trains, the "squirt", sno sheds, most of the station buildings and some of the tourist trains that have traversed the line. The scenic feature of this line is the climb up the coastal escarpment from the coast to the Sutton Forest plateau.

The text is easy to read and very interesting for it covers some unique trains in NSW.

Bob Gallagher



Hornby PS900 Power Control Unit. Our sample supplied by the importer, Intertoy Pty. Ltd. Available from most hobby shops. Price: \$77.77.

This unit is contained within a plastic box with dimensions of 6 3/16" wide, 5 1/4" deep and 4 1/4" high. The control panel is slightly angled and contains three function switches. These are (from the left) the Direction Switch, Speed Control and the Full/Half Wave Rectification Switch. The Direction and Rectification switches are of the rocker type; the Speed Control is of the standard rotary type.

The unit is designed for joining with other modules in this manufacturer's range thereby making an aesthetic and uniform control panel. This unit, as with the others, has a recess in the top of it to accommodate the standard Hornby point and/or section switches coupled in banks. If the operator does not wish to use these switches a cover hinges over the recess and makes the top of the unit flat and even.

The back of the unit provides outlet terminals for 12 volt DC (controlled) and 15 volts AC. A 12 volt DC (uncontrolled) tapping is provided on the side of the unit in readiness for connecting to another of the range.

Recorded outputs are as follows:

AC = 18 volts; DC (both controlled and uncontrolled on full wave rectification) = 16 volts; DC (on half wave rectification) = 7 1/2 volts. Total amperage is 2 amps. The unit is protected from short circuits by thermal overloads.

Control on full rectification resulted in me being able to operate trains as slot car speeds, but switching to the half wave mode was a different kettle of fish. A more realistic and controllable speed was obtained — especially at shunting speed. This function of the unit is quite satisfactory. Regrettably the rocker switch was not making positive contact, thereby causing the train to stop and start intermittently. I would hope that this is not a standard fault in what is otherwise quite a good control unit.

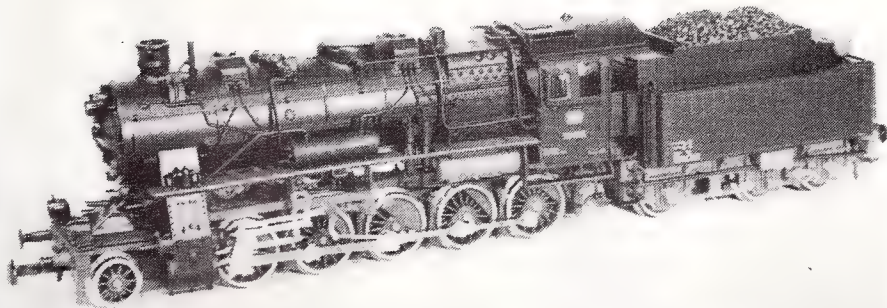
Allan Brown

Roco HO scale German Steam Locomotive. Our sample supplied by Punchbowl Hobby Centre, 761 Punchbowl Rd, Punchbowl, NSW 2196. Price: \$94.00.

This is the first in the steam outline locos by the Austrian firm of Roco. It is of the German Railway's BR58 class 2-10-0 freight locomotive.

A heavy can motor in the all metal tender drives through reduction gears to all three axles of the tender. Traction tyres are fitted to four of the tender wheels. The tender is permanently coupled to the free rolling locomotive, the latter having the electrical pickup through five of its ten all flanged drivers. An ingenious sideplay system allows this loco to traverse curves as sharp as 17".

Couple rods, connecting rods and all valve motion



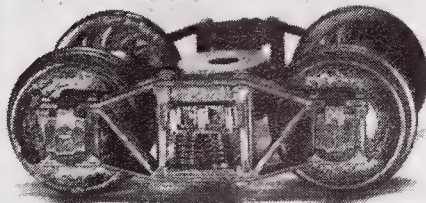
are extremely fine and they all work. Brake shoes and hangers are fitted, as too is all the rodding that would make the brakes work. In other words the loco contains full underbody detail.

The loco body is injection moulded plastic and contains a wealth of piping. In some cases this is moulded integrally with the body. In other cases it is added on. The latter predominates. The handrails are a scale thickness and distance from the boiler. The detail of this loco would easily equal that on the high quality brass. Bi-directional lighting is fitted. Flanges are to NEM standards but no trouble was found through NMRA standard points.

The model runs superbly and is a joy to operate, from a dead crawl to really pouring on the coals. And does it pull!

This is without a doubt the finest plastic model steam locomotive I have ever seen and it is well worth every cent of its \$94 price. It makes one wonder whether a change over to Roco is more economical, what with the price of brass nowadays.

Allan Brown



Arch Bar bogies in HO scale by KADEE. Sample supplied by Ferara Distributors, 5/Lot 8 Olive Grove, Dandenong 3175. Price: \$3.70 pair.

Bogies or 'trucks' as our American counterparts call them are a necessary component of a wagon for they are the means by which a wagon is moved. From the development of the bogie many styles have been developed for varying uses, the arch bar being developed early in the piece for goods (freight) wagons. This style of bogie obviously received its name from the arched bars that support the axle boxes. Many early Australian vehicles used a version of the arch bar bogie, especially the 'E' wagon on the NSWGR.

This bogie is provided for the American market, thus uses the dimensions of an American unit. They are quite at home on an Australian styled vehicle despite the many differences. The side frames are metal castings, having a wheel base of 5'6". The wheels are 33" and have a RP-25 contour the backs being ribbed. The wheelsets are made from a non-magnetic material, thus assisting with the use of above track magnetic uncoupler ramps. The bogie is fully sprung and is equalised, so that it can traverse relatively rough sections of track. The bogies roll free and true, an important quality. The detail is sharp and the blackened appearance removes the necessity for painting. The bolster mounting hole is so formed to remove the possibility of sideplay. A quality product, that is of use to most modellers.

Bob Gallagher.

Kleiber Light Delivery Truck, in HO. Our sample supplied by Aspect Models, 9 McGregor St, Canterbury, Victoria 3126. Price: \$13.70.

This is another item in the long line of highly detailed parts and kits from the firm of S. S. Ltd.

The Kleiber truck kit comprises 50 white metal castings and brass wire packed in plastic bags. The instruction sheet is of the exploded view type divided into 4 sub-assemblies; there are no written instructions.

The kit goes together very well, the parts being well formed with little or no flash. Locating pins are moulded on some parts. The only trouble I experienced in construction was in the fitting and locating of the motor hood. Before gluing, have a few dry runs to get accustomed to how the parts fit together. I used the Alpha Cyanoacrylate (Super Glue) type of adhesive and found it held much better if the oxide was removed from the areas to be glued.

When handling during construction be careful not to use too much pressure as the parts, being made of



white metal, are easily bent.

When painting I found it best to paint the truck in three main sub-assemblies — cab, chassis and truck bed, starting with an etch or primer then your colours. Finish off with a clear flat matt to protect the paint.

Perhaps, for the price, a bit expensive, but for that special effect or highly detailed area it could do nothing but enhance the scene on your layout.

Jeff Moonie

NSWGR 'CPH/CTH' plan by DATA SHEET in HO scale. Sample supplied by DATA SHEET, 21 West St, Paddington 2021. Price: \$1.20.

The CPH/CTH rail motor set was introduced to the NSWGR between 1928 and 1930 and was tagged with the affectionate term of 'tin hare' after the dog racing lure that was at the time of introduction of the CPH a popular growing sport. The 'Tin Hare' was utilised for passenger operation on the branch lines, operating as a feeder service to the steam hauled passenger services. In latter years the units have been used on commuter workings from Sutherland to Otford, from Campbelltown to Pictou, from Pictou to Moss Vale on the old loop line, from Cootamundra to Tumut, etc. etc.

The CPH unit is the powered unit while the CTH is the trailer car with driving equipment. Over a period of time the DATA SHEET plan has proved to be among the best available in this country for much research is put into every project, the CPH/CTH being no different. Side elevations of both cars is shown along with the front and rear of the CPH and the No. 2 end of the CTH. A side elevation is shown of the rebuilt version while the original version shows the crownlights and panelboard siding. The plan view is extremely helpful if the aim is to position the seating correctly but of little use to give any guide to the layout of the roof piping or ventilator layout. Underfloor detail is superb as are the bogies; however the producer points out an error, for the trailing bogie on the rebuilt CPH does not have the sandboxes shown on the plan. Photographs accompanying the plan show the original version in tuscan red and russet and the rebuilt version in standard NSWGR red. Apart from the lack of detail for roof layout another superb plan.

Bob Gallagher

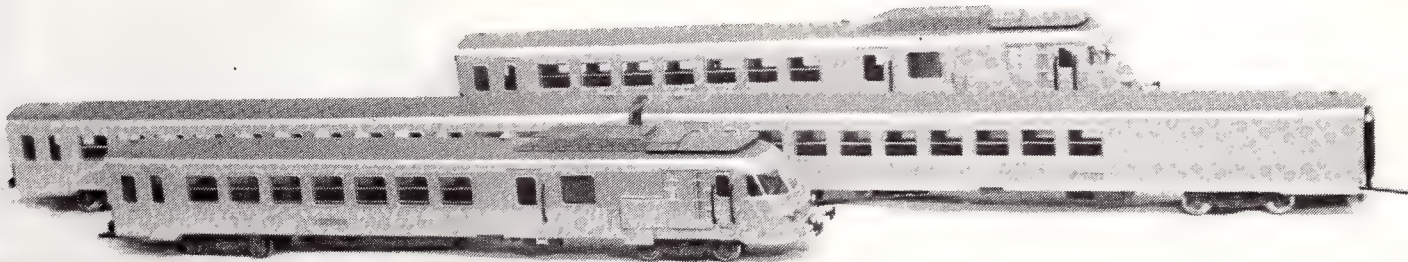
Tray Decking roofing material, manufactured and supplied by G. Duncan, 18 Waratah Ave, Glenhuntly, Vic. 3163. Price: \$2.50 for 10 sheets.

For many years corrugated iron has been the basic roofing and cladding material used in Australian country buildings. Modern industry has seen the introduction of a decking material supplied in either galvanised iron, aluminium or pre-painted iron. These materials sell in long sheets (18", 20", 25" etc) and come in varying widths, and sell under varying brand names, such as Paneldeck.

The products under review are a 'N' scale sheet and a 'HO' scale sheet. Both are pressed out of .006" aluminium sheet which is cut into 150 mm x 75 mm sheets. In both scales the single pressings are 12" apart and approximately 2/3" deep, very close to some sheeting in the prototype. Readers must allow for the varying differences between brands, for it seems each brand name manufactures his sheeting a little different to the other, and of course none mix. (Maybe some manufacturers need a NMRA to help compatibility of brands).

The sheeting is easy to use, a good cutting instrument being a sharp scalpel blade. It is easy to glue in place, Selley's 'Gell Fix' being one product that eliminates sticky threads. For those who scratchbuild their own contemporary buildings, a good 'Australian' product.

Bob Gallagher



Jouef Turbo-Train, in HO gauge. Our sample supplied by the importers Cyclops Industries Pty Ltd. Price: \$10.75-\$29.75.

The five cars which make up this train are produced as separate vehicles they being a powered terminal car, a composite trailer, a second class trailer, a second class trailer with restaurant and a non-powered terminal car. All are in SNCF colours.

The cars scale out at approximately 87' long and are provided with a special extended bar coupling to assist in negotiating tight radius curves. However, the coupling is rather a nuisance if one has to separate the cars, but no doubt the manufacturer does not consider this should happen very often.

The cars are well finished and detailed as is expected from Jouef. The train runs well, the single power car which drives both axles of one bogie via a neat universal and gear arrangement, being adequate for the purpose.

Turbo-trains are now used widely on French National Railways and similar vehicles are operated by Amtrak in the USA. With a change of colour scheme, the cars would not look out of place on an American layout.

The streamlined appearance of the train may not appeal to everyone but it would be an interesting addition to a modern layout.

Graham Ahern

Scribed Wood 12" and 6" planks in HO. Sheets 300mm x 75mm x 3mm available from G. Duncan, 18 Waratah Ave, Glenhuntly, Vic 3163. Price 5 sheets for \$1.75 post paid.

I use scribed wood exclusively in the construction of buildings and rolling stock and so I looked forward to reviewing this local product.

Scribed wood sheeting is used to represent the planked sides of old style rolling stock and structures built when wood was more commonly used as a building material.

The sheets are cut from top quality three-ply and have parallel grooves accurately scribed on one face. The spacing of the grooves is accurate but on the samples examined produced 12" and 8" planks when measured with a scale rule. The scribing is sufficiently deep to stand out after painting and the sheets, being three-ply do not need bracing which is a distinct advantage over thinner varieties of sheeting.

The range is limited and I find I usually require planks of 6" or less but should you need siding in the sizes available here then this product will be more than satisfactory.

Ron Cunningham

Australian Signs. Our samples supplied by the manufacturer Emerald Gazette, 4 View Street, Upwey, Vic. RRP: \$1.50.

The contents of this set of miniature signs consists of four printed sheets — one in blue, one in red and two in black. The era depicted by the signs is from 1920 to 1940. The signs cover advertising posters, bank names, company names, platform signs, roadside signs and more, all appropriate to the Australian scene. NSW modellers will be impressed with the good old Griffiths Bros teas signs. The purpose of the different coloured sheets is to give a basic printed sign to which the modeller adds background colour, either by crayon (do they still exist?), pencil, marking pen or what have you.

The scale is predominately HO/OO but some are suitable for other scales. All in all these signs are ideal for adding to the overall feeling of the period being modelled.

Allan Brown



Semi-Detached house kit in N scale by Builder Plus. Sample supplied by the Australian distributors, Zimble Pty Ltd, 48 River St., South Yarra, 3141. Price: \$2.25.

Since AMRM last reviewed the Builder Plus N scale kits the style of the kit has changed for the better. Previously the kit was fully printed and only needed cutting out, folding and glueing together, but the finished product lacked depth. The kit under review now is a pre-coloured card kit of an English semi-detached house. The unit is double story with an optional annex. The unit would fit into an old closely developed township in Australia.

Assembled the kit needs an area of 65mm x 85 mm and it would be fitting to have a street of similar houses for that has been the practice of our town planners. Most parts are pre-punched from the main sheet and only need a sharp blade for proper separation and cleaning up. The edges need painting with a water colour that matches the colouring of the surrounding material. All window and door openings are pre-punched, the window glazing and architrave being pre-painted on acetate sheet. Window lintels and door fittings are provided on card. Some inside detail (walls and carpet) is supplied to decorate the interior that can be observed through the windows.

Most parts fit well, although this depends upon the adhesive used. The instructions are explicit but a few assembly descriptions are too brief. The kit is within the scope of the raw beginner and can be completed over 2 or 3 nights.

Bob Gallagher

NSWR "MRC" Van Kit in HO Scale by Australian Transport Models, P.O. Box 60, Unanderra, NSW 2526. Sample supplied by the manufacturer. Price: \$5.00.

The "MRC" refrigerator (ice) van was introduced to the NSWGR in 1933 for the express purpose of transporting products (e.g. meat) that required refrigeration during transit; the refrigeration was supplied via ice. The ice was loaded into specially provided panels in the end and roof of the vehicle, hatches being provided for access. Access to the hatches was by a ladder and roof walk. When

introduced the 58 vehicles were painted white but constant use and varying weather and soil patterns led the original paint scheme weathering to a variety of shades. The units were used, among other jobs, for transferring meat from country abattoirs to Sydney.

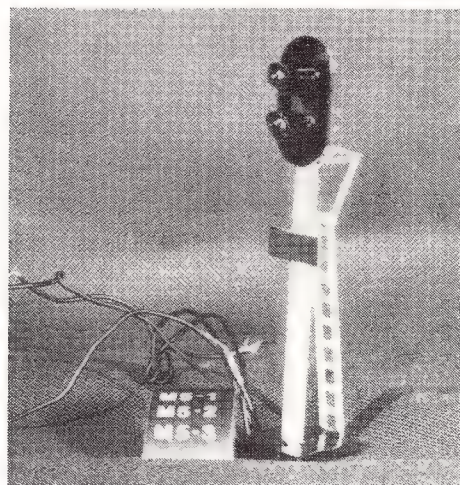
As with most vehicles, variations occurred in the class and changes in codings noted the variations. The basic unit (MRC) had two large ice hatches at each end and four others, two on each side of the walkway. The MBC had only the two large end hatches (and no walkway) as did the MFC. The MB was completely devoid of roof hatches or walkway and in most cases the ladder was removed. GRC and BPV variations of the MRC are in existence but extra doors have been added to facilitate correct loading. One colourful variation of the MRC is the Nepean Milk unit which was painted white and lettered NEPEAN MILK (red lettering). Australian Transport Models supplies the MRC, MBC and MB in kit form, the latter two costing \$5.00 each.

It is difficult to consider this unit as a kit by Australian standards for it is a one piece unit, moulded in plastic. There is no evidence of flash and detail is very sharp. There were some moulding imperfections in the sample unit, the roof detail is inaccurate in that it has two individual ice hatches each end where, on the prototype, a single large hatch is provided.

End detail, in the form of ladder and foot rest, have to be added separately (and are supplied) as does the brake cylinder, air reservoir and hand brake lever. The PMH Rivetted bogies, which are supplied, need to be screwed into the base; however some caution here is required, the marking for the screw hole is incorrectly placed and forces the bogies to overhang the van. The correct measurement from each end for the bogie pivot is 5'6" but an extra allowance would give a better appearance.

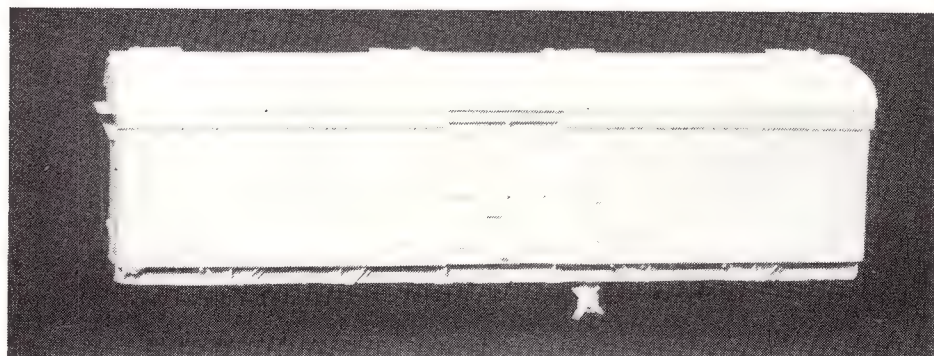
Overall the unit is well proportioned, although a little heavy. A suggestion would be to purchase the MB/MBC version and add the correct roof detail. For the price, a fine product.

Bob Gallagher



Two Aspect Colour Light Signal, produced by AMRI. Our sample supplied by Hoopers Toys, 474 Bunnerong Road, Matraville, NSW 2036. RRP \$3.75.

This signal is generally in accordance with colour



light signal design in NSW. One set two aspect signals are a relatively recent arrangement usually to be found where lower quadrant signals have been replaced with the installation of automatic signalling.

The signal mast has been shortened in the latest version with the top at a scale 18' above ground level, it is much more appropriate.

The signal is painted black and white in accordance with NSW practice and three different stick-on labels are provided for the signal identification.

A wiring diagram is printed on the back of the pack to assist with installation.

A useful addition to any modern Australian layout, at a reasonable price.

Graham Ahern

1977 AUTHORS AWARDS — A.M.R.M.

In my assessment of the articles presented in the A.M.R.M. during 1977, I have tried to allocate credit on the basis of the article performing assistance to the largest number of readers possible. Therefore, my preferences for the four leading articles of 1977 are:

1. Bill Bolton, 'Painting Methods for Model Railroaders'
2. G. Stillman, 'Weatherboard Houses'
3. Ross Hurley, 'Scaling Photographs'
4. Ron Cunningham, 'Building Four Wheeled Goods Wagons'

Comments:

1. The multi-part article 'Painting Methods for Model Railroaders' dealt with the full range of aspects associated with this part of the hobby; viz. preparation, methods of application, finishing and weathering. A good, all-round article.

2. This was an article which demonstrated construction methods applicable not only to houses, but to a wide range of structures. For this reason, and owing to the existence of weatherboard prototypes in many parts of Australia (thus making the article of universal appeal), Mr Stillman's essay is a good companion to Ross Hurley's earlier A.M.R.M. articles on stone buildings.

3. Ross Hurley, in his article, 'Scaling Photographs', deals with a subject which never seems to attract a great deal of text in any magazine. There are two main advantages of the article mentioned:

- a. It is useful where a diagram of the vehicle or structure does not exist or, in the case of rolling stock, if the vehicle possesses special features which are not covered by the diagram of the standard car, and
- b. It is useful where details of a vehicle or structure are omitted from the relevant diagram.

4. The use of four wheeled goods wagons has been common in most parts of Australia; these vehicles are part of an era which is now drawing to a close. Ron Cunningham's essay deals with two major areas of modelling four wheelers: construction from raw materials, and the use of commercial items. The article is, therefore, of widespread appeal.

Other Articles Worthy of Mention:

1. Phil Jeffery, 'Modelling Sheep Pens'
 2. Ted Gray, 'Oil Tank Loading Gantry'
- These two essays deal with specific aspects of the railway scene and, in principle, are representative of structures found in many parts of the country. Therefore, although the subject of each article may conform only to a specific system or company, the techniques used can be applied equally to similar prototypes found elsewhere. Bob Gallagher, in his article 'A Reason for Existence' mentions the many items which can be placed on a layout to justify the types of traffic seen in operation. The two articles mentioned above are, hopefully, the harbinger of many more essays in this category.

Paul Rogers

BOOKS

Reviewed by John Bevan

It is pleasing for the writer of this obscure and possibly not widely read column to discover that the editor not only reads the column but considers its wisdom important enough to be transmitted to the readers again in the 'Comment' column of the last issue. If Allan now tells me that he hasn't read my 'Books' column of January/February 1977 I don't know whether to believe him or not.

It is my experience that model railway fans are commonly interested in the prototype railway and its equipment as well. The modern modeller, (by that I mean the modeller of modern or present-day railways) will be very interested in the evolution and development of the diesel locomotive.

Two important source books for this subject are Peter Clark's 'An Australian Diesel Locomotive Pocketbook' and Jerry A. Pinkepank's 'The Second Diesel Spotter's Guide'. The inclusion of the second book dealing with almost exclusively United States locomotives may raise some eyebrows but I believe that it provides much background information essential to the understanding of Australian diesel locomotives.

Peter Clark's book is small and comprehensive. It simply lists every diesel locomotive used by railways in Australia. It commences with a two-page background history of railways in Australia and then has an 11-page history of the diesel locomotive in Australia. Peter points out that the various railway systems missed the opportunity to standardise on locomotives when dieselising and have wasted resources on pursuing their own pet theories. The descriptions of the locomotives are laid out in what may seem to be an unusual manner but is the most logical. The average Australian railfan being a narrow one-system person likes to see 'his' locomotives all together in the order of introduction or class type of his system and then followed by the others. Peter however has chosen to list his locomotives by prime mover (diesel engine) order so that the first

locomotive is Hammersley Iron's Alco S2 (because its prime mover is an Alco 539 diesel). After all the Alco-engined locomotives, whether built by Alco, A. E. Goodwin, Montreal Locomotive Works, A. Goninan, or Com-Eng, follows the NSWPTC's X100 class because it has a Bedford engine. To find your locomotive you can use the index which lists locomotives by operators.

Each locomotive is described in complete detail. The full dimensions, length, width, height, mass, axle load and speed, as well as engine, generator and motor type are given as well as a short history of the type and a general description.

Jerry Pinkepank's book is laid out differently. Because the US locomotive business is dominated by the builders, and railroads buy virtually only standard models the book is arranged by builder. The Electro-Motive Division of the General Motors Corporation being the largest starts followed by General Electric, Alco, Baldwin, Fairbanks-Morse, Lima, and miscellaneous builders. The detail given is scantily compared with Peter Clark's book. No details of size apart from power are given and the large numbers of purchasers make it impossible to give road numbers. As an example over 3500 F7 locomotives were built and sold to a large number of railroads; to give road numbers of these alone would greatly increase the size of the book.

The Australian modeller will find this book useful as he can use it to identify US locomotives which are commonly used for conversion to Australian locomotives. The serious modern Australian modeller really should have both these books.

'An Australian Diesel Locomotive Pocketbook' by Peter J. Clark. Australian Railway Historical Society, New South Wales Division, Sydney. ISBN 0 909650 02 0. Price \$3.60.

'The Second Diesel Spotters Guide' by Jerry A. Pinkepank. Published by Kalmbach Publishing Co., Milwaukee, USA. ISBN 0 89024 026 4. Price \$6.75.

Both books from ARHS Sales Centre, 27 Belmore St, Surry Hills, NSW.

1977 Photo Award

The judge, John Bevan, has chosen the photographs accompanying Phil Knife's 'Abbotsbury Southern' in the September/October issue as the best photos of 1977. Again the selection of the winner was made hard by the high level of photographic art submitted by our readers. The prize was won despite close competition from Frank Kelly and AMRM staffers Graham Ball and Alan Templeman. Graham and Alan are, of course, excluded from winning the prize, but win our thanks for their continuing efforts.

EDITOR'S AWARD.

The Editor's Award for what he considers to be the most complete article of 1977 to be set for print goes to Neil Graham for his 'Comrails Kitbash' in the July/August issue.

Mention must also be given to Hugh Williams' article 'More Muscle' in the November/December issue — a close second place.

Feedback in respect to both of these articles was that the necessary mechanisms, etc., required for each project were virtually unobtainable a matter of days after the respective issues hit the news stands.

CANBERRA MODEL RAILWAY CLUB

1977 MODELLING COMPETITION RESULTS

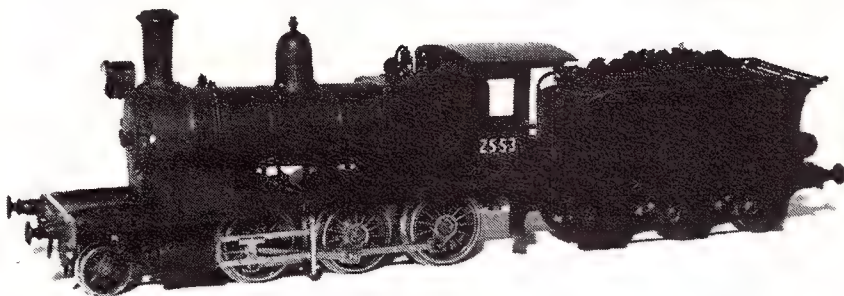
SECTION	WINNER	MODEL
Scratchbuilt Locos	Laurie Evans	NSWGR D55 2-8-0 (H0)
Kitbuilt Locos	Kevin Loughry	NSWGR Z28 2-8-0 (H0)
Scratchbuilt Rolling Stock	Fred Schmidt	4 NSWGR wagons (00)
Kitbuilt Rolling Stock	Alex Mathleson	5 British Wagons (00)
Structures	Ken Gray	Abbotsbury Engine Shed (00)
Detailing and Finishing	Craig Hart	Cotton Belt Loco (H0)
Diorama	David Mitchell	"The Day the Tax Man Came" (P4)
Juniors	Ross Macfarlane	Dock Tank Loco (H0), Detailing & Finishing
Best of Show Award	Laurie Evans	NSWGR D55 2-8-0 (H0)
Best Layout	Phil Knife	"Abbotsbury Southern" (00)

The Dick Hinder Memorial Trophy for Improvers was not awarded as only one entry was received. Favourite model, judged by public, was not awarded due to lack of support.

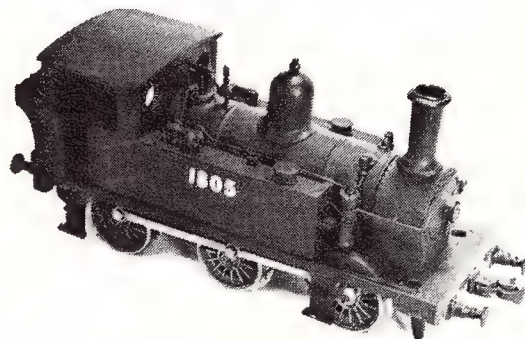
Judges:

Ian Macfarlane (Canberra)
Peter Betts (Sydney)

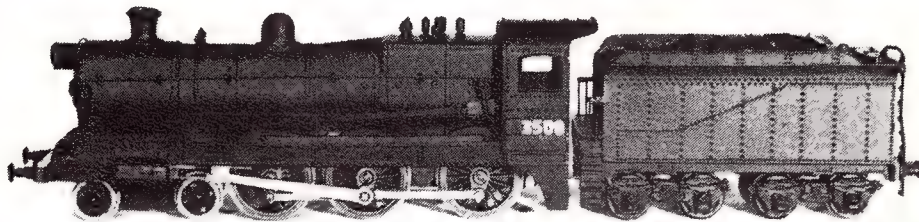
FSM



N.S.W.G.R. Z25 class Locomotive and Tender
Temporarily Withdrawn for Modification



N.S.W.G.R. Z18 Tank Locomotive.
HO Scale Kit \$65.00 + 5% p. & p.



N.S.W.G.R. C35 Locomotive & Tender Kit.
HO Scale. \$90.15 + 5% p. & p.

Printed Brochure, Photograph & general
data available.

Our System of working is Custom Casting on receipt of Order.
Allow about one month from Receipt by F.S.M. to Dispatch.
Dispatch is also in Order of Receipt.
Price List to be Available Soon.

CAST METAL PARTS ARE ALWAYS AVAILABLE. SEND S.S.A.E. FOR OUR PRICE LIST.
F.S.M. P.O. Box 169, FORESTVILLE, N.S.W. 2087.

MARKET PLACE

PRIVATE: 12 words for 75 cents, extra words 4 cents each. Minimum \$1.20 per insertion. No advance insertions accepted.

COMMERCIAL: \$1.00 per line, minimum of \$5.00. Advance insertions not accepted.

All monies must accompany copy. If stamps are used as part payment, each stamp must not exceed the standard postage rate, and must not be stuck to any other object.

Send all copy and payment to S.C.R. Publications, P.O. Box 235, Matraville. 2036.

WANTED

Gauge 0 Electric — Hornby, Lionel, Ferris and larger clockwork. All Hornby '0' accessories. High prices paid for mint material. Phone (02) 913 8422 after 8pm or write W. Baker, 1303 Pittwater Rd, Narrabeen, 2101.

WANTED. Hornby '0' gauge 'Caterphilly Castle' crossheads, con and coupling rods or complete engine (elect). Condition and price to P.O. Box 256, Kalamunda, 6076.

BERG'S 48 class, Matchbox Toys pre 1970, Dublo-Dinky toys, Dave Greentree, 67 Edward St. Kurri Kurri, 2327.

LIVE Steam '0' gauge locomotives. J. Mills, 42 Carling Ave, Doncaster, Vic. 3108.

FOLLOWING diesels as made by Alco Models/KTM in good/mint condition. General Electric U-50c and Alco C-855 A & B units. Phone (02) 622 4839 a/h. C. Riley, C/o Box 4097 GPO Sydney, 2001.

WANTED 0 gauge Australian prototype for cash or will swap B/Lowke live steamer, Lionel, Lima, Rivarossi or Ferris 0 gauge or brass H0, H0n3 or 00 items. Higgings, 14 Hiron St, St. Lucia 4067.

FOR SALE

TWO Rivarossi d/e locos (similar to NSW 421) \$17 each, Lima NSW 44 class \$18, Rivarossi 4-6-2 Pacific \$24, two Fleischmann German Railways dining cars \$7 each, Fleischmann sleeping car \$7. All fitted with Kadec couplers. Ring Sydney 344 8441 after hours. 00 gauge Wills loco kits, Peco wagons and rails, Ratio coach kits, all as new. Phone or write for list — Changing gauge. G. Ledger, Horans Lane, Cross Vale. NSW 2753. Phone (045) 72 1232.

RIVAROSS H0 N.W. Y6B weathered, little use \$75. Rivarossi H0 2-10-2 fitted with Sagami can motor, weathered, turned flanges to NMRA standards runs well \$75. Rivarossi Big Boy, as new, hardly run \$87. Rivarossi Challenger U.P. weathered, Sagami can motor, \$125. D. McIntyre, 42 Windermere Ave. Kingswood, 2750. (047) 21 5063.

SUYDAM brass Interurban Cars, 1 Niles wooden interurban in good running order \$40, Pacific Electric Big Red one pole missing and other minor repairs needed \$35. B. Castle (043) 41 8974.

QUALITY 15mm wheelsets by P.F.M. 2 sets only. Brand new. Set consists of: four axles with wheels, journals, springs, crankpins, siderods, gearset. Would suite 50/53/55 or 60 class. \$18 per set. J. Sever, 48 Bunday St, Higgins, ACT. 2615. Ph (062) 54 2526.

NSWGR locomotive gauges, restored in polished brass. Steam pressure & pilot drifting. \$35. J. Sever, 48 Bunday St, Higgins, ACT. 2615. Ph (062) 54 2526.

SWISS N scale layout as described in this issue of AMRM. Price \$600 ono. L. Taylor (047) 39 1474.

QUANTITY of Mantua style couplers, many still in packets. Enquiries to Advertiser 1, P.O. Box 235, Matraville. 2036.

ECON Models TGR 'A' wagon kits in H0n3½ scale, surplus to requirements. Offers to Advertiser 2, SCR Publications, P.O. Box 235, Matraville. 2036.

0 Scale F45 Brass diesel, brand new. Wanted any U.S.H. or Max Gray brass locos and cars. Phone or write to G. Leitzke, 23 Bright Cres. Mt. Eliza. 3930. (03) 787 6860.

NSW prototype H0 locos and rollingstock exccal condition including Lima 44 class (un-assembled), Bogie and 4 wh goods wagons, Pass include TAM, FS, BS, EHO also Wiking road vehicles. Reasonable prices. D. Molloy Ph. (02) 642 3643.

COMMERCIAL

LATHES. The American made TAIG micro lathe is now here in Australia. Complete kit available. Send S.A.E. for details. Also 1 only Unimat machining centre \$380 new, SOUTH-SIDE DISTRIBUTORS, P.O. Box 183, Port Kembla, NSW 2505.

METAL locomotive kits by Bowser, Arbour Models and Cary Loco Works. 5 pole or Can motors. Write for details of availability. Reservations taken. U.P. 4-6-6-4 Challenger Loco \$88.76. P.R.R. T1 Duplex 4-4-4-4 with tender, two motor drive \$117.15. We deal with Walthers and will import any items. TRAINS and TRACK, P.O. Box 177 Applecross 6153. Ph 457 6840.

lima

lima

John D. Leeman

Agent and Wholesale Distributor
13 JOSEPH ST. BLAKEHURST.
N.S.W. 2221 TELEPHONE 546 5147

Distribute a complete
range of

lima

locos, coaches,
wagons, track, etc.
in OO & H0.

also

HUMBROL

complete range includes
enamels, adhesives,
and specialising in
AUTHENTIC RAILWAY
colours, 15ml. tinlets

Please note:
TRADE ONLY SUPPLIED.

WINDSOR PUBLICATIONS

114 King Street Melbourne

Basement,
Corner King &
Little Collins St
Melbourne. 3000

Railway and Tramway Bookshop.

NEW Titles on order from UK & USA.

I do not intend to make catalogues available but to use this space in AMRM instead. All books listed are on order from the U.S.A. and U.K. They may be reserved at the Basement Shop 114 KING STREET. MAIL ORDER CUSTOMERS will be advised of handling and postage costs before their books are posted.

Under Pennsy Wires.
Fifty Best photos of Pennsy.
Fifty Best photos of NYC.
Fifty Best photos of B & O.
Pass Train Annual No 2.
Portrait of a Silver Lady.
Cotton Belt Locomotives.
Southern Pacific Review.
UP Steam Eastern District.
Matches Rails and Flumes.

Union Pacific Power Review.
Sherman Hill.
Turbines Westward.
Five to Conquer.
Route of the Warbonnets.
Century of SP Locos.
Gilpin Gold Tram.
UP Steam Nth West Dist.
Grand Central.
Big Blow.

UK Titles. Because of the high prices of English Books in this Country I try to stock only titles which I can get direct. Oxford, Bradford Barton, Oakwood, MAP, and Goose will be the Publishers I intend to deal with.

MOS operates only on titles listed.

**I sell all kinds of unwanted model rail-
way equipment on 15% commission.**

I buy all railway books and magazines.

LOWEST EVER DISCOUNTS!

With up to 50% OFF new items and even more on second-hand items, prices in our big "Specials List" must be hard to beat. Send S.S.A.E. for list which covers most HO/OO and N brands: Fleischmann — Rivarossi — Roundhouse — Minitrix — Roco — Shinohara — Pola — Kibri — Heljan — Con-Cor — Vollmer — Sekisui — etc.

**RAILMAIL — P.O. Box 152, WELLINGTON, NSW,
2820. Phone 1145**

RAILKITS AUSTRALIA

As demand has been exceeding supply, we are not always able to supply kits ex-stock, although all orders will be filled as expeditiously as possible. The next item due will be the 'HR' terminal car, probably in two of the three versions to be produced. We do urge customers who have not already done so to lodge SAE's with us so notification can be sent direct when new models are released.

Currently in production is the 'FR' car at \$12.25 (complete less wheels), accessory packs 'E1' at \$1.50, 'E2' at .90c and 'E3' at \$1.25. 'R' car data sheet at 70c posted and plastic wheels at 50c per car. Please add 5% for postage and packing.

Prepared and distributed by:—

T. C. RAIL MODELS
P.O. Box 374,
HORNSBY,
2077, N.S.W.

**A
SUBSCRIPTION
TO A.M.R.M.
ENSURES YOU A COPY
OF
AUSTRALIA'S MAJOR
MODEL RAILROAD
MAGAZINE**

RECEIVE YOUR COPY HOT OFF
THE PRESS. KEEP YOUR LOCAL
POSTMAN IN WORK.

A years subscription (6 issues) costs
\$6.70 or \$8.70 posted overseas.

Providing that the application for subscription is made at the AMRM office 4 weeks before the publication of the next issue the first magazine of the subscription will be the next issue, failing that the issue after. Receipts are not issued although acknowledgement of receipt of subscription will be given if a S.S.A.E. accompanies the subscription.

Subscriptions are not back dated.

Subscriptions are for one year only.

Subscribers are advised upon the expiry of the subscription. Please do not send money in anticipation of expiry.

**SEND YOUR MONEY
NOW
TO**

**S.C.R. PUBLICATIONS,
P.O. BOX 235, MATRAVILLE,
N.S.W. 2036**

Please make all money orders payable
to Matraville.

Sale

Check these out



36" Brass Flex track .99c

36" dia Circle track \$2.95

HO Scenics (CARD) .99c

Chessie F7 Diesel & Caboose \$9.98

Big Range-Fabo Prices on

Hornby Lima Jouef Tyco

Roco Piko Lifelike Minitrix



LAYOUT & TRACKSIDE ACCESSORIES • LAY BYS • MAIL ORDERS

TOYMAN Imports PTY. LTD.

76 Railway Street, Yennora

Phone: (02) 632 5002

THE MODEL RAILWAY CENTRE

The MECCA for MODEL RAILWAYS South of the City of SYDNEY.

Our HO & OO range includes:

PECO — RIVAROSSA — HORNBY — LIMA — MODEL POWER — MECHANOTECHNIKA — WRENN — JOUEF — TYCO — PIKO.

Our N range includes:

PECO — ARNOLD — MINITRIX — RIVAROSSA — PIKO.

Our range of kits include:

VOLLMER — POLA — HELJAN — KIBRI — FALLER — SUPERQUICK — VAU-PE

Plus:

KALMBACH BOOKS & MAGAZINES — A.M.R.I. Products — A.M.C. Products — LOCOMOTION Products — AIRFIX KITS — M & J DECALS — HUMBROL PAINTS.

REPAIRS

LAYBYE

BANKCARD

555 KINGSWAY, MIRANDA. 2228. Phone (02) 524 8855

TRADING HOURS

Monday to Friday: 9 am to 5 pm

Saturday: 9am to 12pm.

Open Thursday Evenings.

SUPERQUICK

MODEL KITS

AN **AMC**
DISTRIBUTED PRODUCT



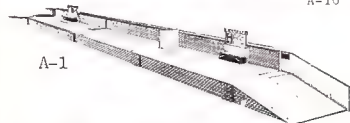
A-10



B-21



B-27



A-1

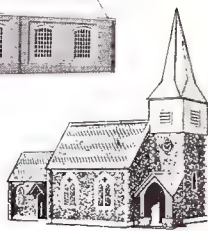
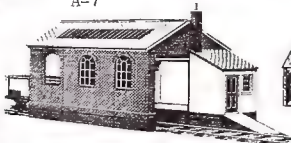


B-25



A-5

A-7



B-29



C-1



B-26



A-6

- A-1 Station Platform (side) 610 x 51mm .. \$1.95
- A-2 Side Platform Building 146 x 57 x 57mm .. \$1.95
- A-3 Island Platform 610 x 63mm .. \$1.95
- A-4 Island Platform Building 356 x 25 x 44mm .. \$1.95
- A-5 Two Track Engine Shed 292 x 114 x 114mm .. \$2.95
- A-6 Signal Box 127 x 70 x 95mm with
Platelayers Hut 55 x 38 x 38mm .. \$1.95
- A-7 Goods Shed 127 x 102 x 95mm .. \$1.95
- A-8 Water Tower 98 x 66 x 120mm with
Weighbridge Shed 71 x 40 x 50mm .. \$1.95
- A-9 Block of Flats 203 x 51 x 95mm .. \$1.95
- A-10 Large Terminal Building with side
buildings etc. 195x160x180mm .. \$3.95
- B-21 Swan Inn 152 x 89 x 114mm .. \$1.95
- B-22 Two Country Shops 60x70x127mm & 57x44x120 .. \$1.95
- B-23 Barclay's Bank 139 x 70 x 120mm .. \$1.95
- B-24 Farmhouse 159 x 57 x 102mm .. \$1.95
- B-25 Police Station 165 x 70 x 102mm .. \$1.95
- B-26 Hayloft & Barn 152 x 76 x 114mm .. \$1.95
- B-27 Supermarket 152 x 83 x 102mm .. \$1.95
- B-28 Elizabethan Cottages .. \$1.95
- B-29 Church with Steeple .. \$1.95
- C-1 Low Relief Hotel, Offices & Restaurant .. \$1.95
- C-2 Low Relief Cinema, Post Office, Shop .. \$1.95
- C-3 Low Relief Block of Flats & Shops .. \$1.95
- C-4 Low Relief Period Shops & Offices .. \$1.95

BUILDING PAPERS .. per sheet 18 cents

- D-1 Red Brick
- D-2 Yellow Brick
- D-3 Engineers Blue Brick
- D-4 Flat Red Tiles
- D-5 Grey Slates
- D-6 Grey Paving Stones
- D-7 Pink Paving Stones
- D-8 Grey Sandstone Wall (Ashlar)
- D-9 Red Stone Wall (Ashlar)
- D-10 Grey Sandstone Wall
- D-11 Red Stone Wall (Coursers)
- D-12 Grey Rubble Wall
- D-13 Red Rubble Wall

Bring your layout to life
WITH

MERTEN
FIGURES & ANIMALS



- HO/OO NORMAL BOXED SETS .. \$250 PER BOX
- HO/OO LARGER BOXED SETS .. \$325 PER BOX
- N GAUGE BOXED SETS .. \$225 PER BOX *
- O GAUGE BOXED SETS .. \$395 PER BOX

HO/OO LARGER BOXED SETS

- 1001 4 Horses, 3 Cows, 1 Bull
- 1002 3 Horses, 1 Ram, 2 Cows,
1 Calf, 1 Billy
- 1004 8 Deer: 4 Stags, 4 Does

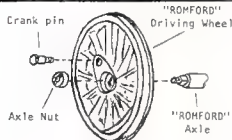
SELECTED ITEMS FROM THE RANGE

For 'N' Gauge numbers are preceded by N - * These numbers are also available in 'O' Gauge

- 800 Railway Refreshment Room Staff
- 806 Six ladies with bags walking
- * 810 Three ladies, three men walking with bags
- 812 Six men with bags walking
- 853 Six ladies individually seated
- * 855 Three men, three ladies seated
- 859 Six men individually seated
- 865 Two groups of three seated
- 870 Six workmen with picks, shovels etc.
- 876 Six gangers, four with sleepers
- 908 Station Staff, 5 men, 1 woman
- 948 Six at beach with hoop, towels etc.
- 954 Six in swim togs reclining on beach
- 963 Wedding Group, bride, groom etc.
- 967 Wedding Guests, 3 couples
- 2180 Five walking; men, women & children
- 2234 Six transport workers with crates
- 2240 Six different transport workers
- 2246 Six policemen: dark uniforms white caps
- 2258 Six trades people, butcher, baker etc.
- 2268 Six loco drivers, firemen etc.
- * 2280 Train Crew, greasers, shunters etc.
- 2286 Six people climbing stairs
- 2292 Three groups of two climbing stairs
- 2295 Six people going down stairs
- 2325 Six service station attendants
- 2337 Six building tradesmen, brickies etc.
- 2343 Six tradesmen: carpenters etc.
- 2398 Six men 'celebrating'
- 2399 Six fat people: 3 men, 3 women

ROMFORD

DRIVING WHEELS, AXLES ETC. (MAINLY HO/OO)



LOCO DRIVERS in diameters of 14, 15, 18, 20, 21, 24, 26mm

- 9701 INSULATED at rims, flanged or flangeless
 - 6 of any one size .. \$9.25
 - less than 6 .. Each .. 1.60
- 9702 NOT INSULATED, flanged or flangeless
 - 6 of any one size .. 4.20
 - less than 6 .. Each .. .75
- 9709 DRIVING WHEEL AXLES with nuts, 16.5mm gauge
 - Full Dozen .. 6.75
 - less than 12 .. Each .. .60

DRIVING WHEEL SETS - Insulated one side

- 9751 for 4-coupled loco, 2 rail .. 5.75
- 9752 for 6-coupled loco, 2 rail .. 8.75
- 9753 for 8-coupled loco, 2 rail .. 11.75

DRIVING WHEEL SETS - All insulated

- 9754 for 4-coupled loco, 2 rail .. 7.50
- 9755 for 6-coupled loco, 2 rail .. 11.00
- 9756 for 8-coupled loco, 2 rail .. 14.75

ACCESSORIES

- 5101 Axle Nut Screwdriver .. 1.75
- 9710 Driving Axles for TT-3 .. Each .. .60
- 9715 Gear Sets 20:1, 30:1, 40:1, 50:1 .. Set .. 3.00
- 9718 Axles for EM gauge, to order .. Each .. .75
- 9721 Extended Axles for outside frames .. Each .. .75
- 9722 Extended Cranks .. Pair .. 1.00

The sketch shows how the Romford driving wheels and axles are assembled. The squared shoulder on the axles which fits into a square hole in the back of the wheel gives accurate quartering and the specially shaped axle nut fits flush into the recessed front of the wheel. The Romford axle nut screwdriver is specially shaped to fit the nuts.

from good hobby shops everywhere

Prices in this advertisement are recommended prices only and there is no obligation for dealers to comply with the recommendation.

FOR TRADE AND GENERAL ENQUIRIES:-

AUSTRALIAN MODEL CRAFT CO.

BOX 118, P.O. ALBURY, N.S.W. 2640

Phone (060) 212473

577 Dean Street, ALBURY

PROSPECT'S — 10th — ANNIVERSARY — EXHIBITION —

Queen's Birthday Holiday Weekend
June 3rd, June 4th and June 5th.
Sat 9am - 6pm. Sun 10am - 6pm. Mon 9am - 5pm
Adults 60¢. Children 30¢. Senior Citz. & Child under 5 Free

New Venue
St. Patricks Hall,
Patrick Street,
Blacktown.
opposite Westfield

On Show Will Be:-

Layouts in HO & N. Static Displays. Lots of brass locos on Show.
Australian and U.S. prototype.

Refreshments Available

Plenty of Parking Space

Second Hand Sale All Weekend Open to All

10% to Club Anything from Brass locos to mags. Bring em along, see if we can sell it for you.

Any enquiries phone Bob Payk. 623 1855

See you There!

Greg Archer
Secretary.

MODEL RAILWAYS IN THE SYDNEY EASTERN SUBURBS

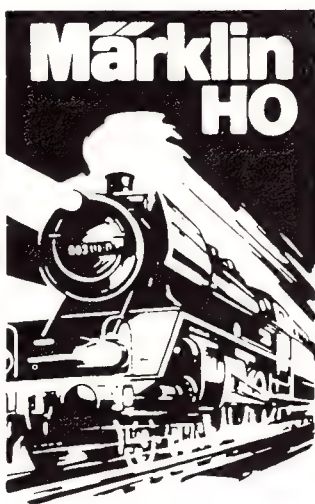
Range Includes:-

PREISER
AMRI Accessories,
ATLAS
HORNBY
LIMA
JOUEFF
LIFE-LIKE
ROCO track
BRAWA
MECHANOTEHNIKA
KIBRI
VAU-PE
PO LA
HUMBROL
H & M
HEKI
ROCO locomotives.

HOOPERS TOYS

474 BUNNERONG ROAD
MATRAVILLE, NSW.
2036. Ph. (02) 661 6615

SEARLE'S
ESTD. 1897



Full stocks of Marklin always available,
also HAMO 2 rail 12v D.C. Marklin locos.

**Mail Order
Specialists**

Shop C6 Wallaceway, Chatswood,
N.S.W. 2067 Phone (02) 412 4238

BACK ISSUES

*The following issues are available subject
to prior sale:-*

No. 1 — April/May 1963 (Reprint)
No. 39 — July/August 1969
No. 40 — September/October 1969
No. 41 — November/December 1969
No. 42 — January/February 1970
No. 43 — March/April 1970
No. 44 — May/June 1970
No. 45 — July/August 1970
No. 50 — May/June 1971
No. 53 — November/December 1971
No. 54 — January/February 1972
No. 55 — March/April 1972
No. 64 — January/February 1974
No. 65 — March/April 1974

All the above are a
All the above are available at the price
of 45c each, including post and packaging.

No. 71 — March/April 1975
No. 74 — September/October 1975

*Issues 71 to 74 are available at the price
of 55 cents each, including post and packaging.*

No. 78 — May/June 1976
No. 79 — July/August 1976
No. 80 — September/October 1976
No. 81 — November/December 1976

*Issues 78 to 81 are available at the price
of 65 cents each, including post and packaging.*

No. 82 — January/February 1977
No. 83 — March/April 1977
No. 84 — May/June 1977
No. 85 — July/August 1977
No. 86 — September/October 1977
No. 87 — November/December 1977

*Issues 82 to 87 are available at the price
of 85 cents a copy, including post and packaging.*

No. 88 — January/February 1978
No. 89 — March/April 1978

*Issues 88 to 93 are available at the price
of \$1.05 a copy, including post and packaging.*

*Please nominate a second choice, in case
of non-availability of the required issue.*

*Please list issues required on a sheet of
paper separate from any other matter.
If including stamps as part payment,
please keep face value of stamps at the
standard postage rate (18 cents) or less.*

*Please allow at least 21 days for the
delivery of goods.*

Post Your Order to:

SCR PUBLICATIONS
P.O. Box 235,
MATRAVILLE. N.S.W. 2036

SCRATCHBUILDERS KITBASHERS

Roofing and siding sheets. Corrugated H/O
only. Tray H/O and N. Alum. .004" — 10
sheets for \$2.50. Copper corr. only .006" —
10 sheets for \$6.00. Sheets 150×75 mm
— 10 sheets min. order. Rail gauges and
cutting guides combined. HO, HO_N2½,
HO_N3, N — \$3.50 each. Scribed wood —
12" and 6" planks, 3 mm. 300×75 mm — 5
sheets for \$1.75. Minimum order 5 sheets.
Cork, 900×31×3 mm — 5 for \$2.10.

All orders post paid — Aust.

**G. Duncan, 18 Waratah Avenue,
Glenhuntly, VIC. 3163**



Aspect Models

9 McGregor Street
CANTERBURY Vic 3126
Australia



Merker & Fischer Prussian T3 0-6-0T locomotive with outside Stephenson valve gear. Price (kit) \$69.00

CATALOGUES

Durango Press (leaflet)	Free
The Wheel Works (leaflet)	Free
Scale Structures	\$5.20
Merker & Fischer	\$7.45
Bemo (leaflet)	.20

MERKER & FISCHER German HO kits

The first four kits listed are mainly of plastic; the others are etched brass with lost wax castings.

Kittel steam railcar	77.00
Prussian T3 0-6-0T (with outside Stephenson gear)	69.00
Wismar railcar	67.00
ET 194 electric railcar	59.00
2-12-0 tender loco	364.00
Prussian T4 0-4-2T	160.00
Prussian G4 0-6-0 tender	214.00
Prussian S10 4-6-0 tender	325.00

M&F parts, transfers and fittings are available to order.

BEMO German HOn2½

V51 Bo-Bo diesel loco	69.95
Six-wheel open wagon	7.70
Six-wheel van	8.30
Buffer van	11.40
Transporter bogies (pair)	4.90
Luggage van	9.60
Passenger car (two types)	10.30
8.6mm wheels on axles	.61
5.2mm wheels on axles	.48
Eggerbahn type coupling, pair	.52
Link & pin coupling, pair	.64
Transporter bogie ramp	5.75

RIO GRANDE MODELS HO kits

HOn3 Swayne log car	12.70
HOn3 Air dump gondola	19.00
HOn3 Rio Grande Flanger	19.00
HOn3 Westside tank car	19.00
Double drum winch	9.50
Marion steam shovel	71.00

SCALE STRUCTURES American HO kits

MACK)BR Special loco with NWSL flea motor	74.95
1929 gas station	21.95
Tool house & pillar crane	21.95
1890 Gould fire engine	9.70
Ford Inspect. Car HO/HOn3	11.50
HOn2 wood mine car	4.95
HOn2 side dump mine car	6.90
Steam road roller	20.15
Steam cement mixer	22.90
Kleiber light delivery	11.55
" stake body, open cab	12.55
" stake body, closed cab	11.65
" panel delivery van	12.55
" dump truck, closed cab	14.35
" " " open cab	15.95
" truck, closed cab	15.25
" " " open cab	15.95
" semi-trailer van, open	22.95
" ditto, closed	23.65
" flatbed, open cab	19.95
Autocar delivery truck	11.20
" stake truck	11.95
JLC track speeder	11.95

THE WHEEL WORKS HO kits

1932 Ford pick-up truck	10.95
1932 Ford panel van	10.95
1934 Ford stake truck	14.95
1934 Ford roadster, top down	10.95
1934 Ford roadster, top up	10.95

Bemo HOn2½ Six-wheel buffer van for coupling narrow gauge rolling stock to standard gauge rolling stock carried on transporter bogies. Price \$11.40

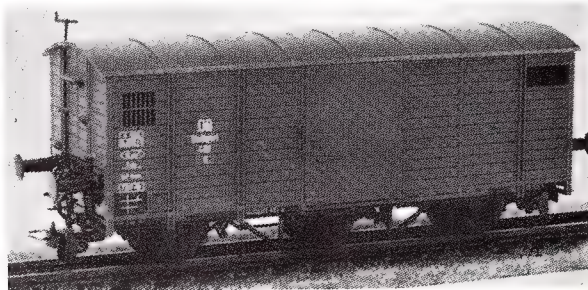
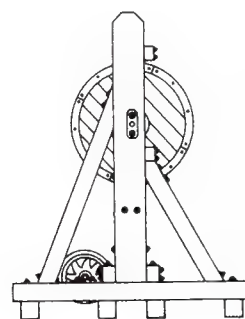
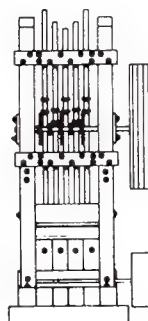
RAILCRAFT Scale rail parts

Code 40 weathered n.s. rail, bundle of 33x3 ft lengths	19.00
Code 55 weathered n.s. rail, bundle of 33x3 ft lengths	20.00
Code 70 weathered n.s. rail, bundle of 33x3 ft lengths	23.20
Code 100 weathered n.s. rail, bundle of 33x3 ft lengths	21.00
HOn3 sleepers, per 1000	4.20
HOn3 sleepers, points, (500)	4.20
H0 sleepers, per 1000	4.25
H0 sleepers, points, (500)	4.25
N gauge sleepers, per 1000	3.50
N gauge sleepers, points, (500)	3.50
HOn3 code 55 No.6 point kits	6.80
Code 40 rail joiners (50)	2.00
Code 55 rail joiners (50)	2.16
Code 70 rail joiners (50)	1.90
Code 100 rail joiners (50)	1.85
HOn3 code 40 track gauge	1.90
HOn3 code 55/70 track gauge	1.85
H0 code 70 track gauge	1.80
H0 code 100 track gauge	1.80
Pliobond glue	1.65
Ramax tie and rail jig	5.20
Crimping tool	4.95

DURANGO PRESS American HO kits

H0 handcar	5.75
Water crane	8.95
Palms station	29.95
HOn3 handcar	6.75
Water column	3.30
Q & T L water tank	11.95
HOn3 handcar shed	12.95
H0 rotary snowplough	59.95
H0 handcar shed	12.95
Gravity stamping mill	13.10
Cleanout rack	4.50
Ash pit with crane	15.95
Coal loader	8.95
18 in gauge mine car	2.95
HOn3 Westside flat car	16.95
ditto, with rotted boards	16.95
Dutchman mining supply	24.95

POSTAGE Under \$10, add 50¢; \$10 to \$50 add \$1.00; over \$50 post free.



TRAIN WORLD

615 Hawthorn Road,
EAST BRIGHTON, 3197
Phone (03) 578 5546

'NEW & USED MODEL TRAIN SPECIALISTS'

Open Monday	10 a.m.-5 p.m.
Wednesday	10 a.m.-5 p.m.
Friday	10 a.m.-9 p.m.
Saturday	9 a.m.-5 p.m.

MODEL TRAINS — BOOKS — MAGAZINES — PRINTS (framed & unframed)

We Stock

'HO' US. Athern, Roundhouse, Ulrich, Ambroid, Roller Bearing, Tyco A.H.M., Kadee, Atlas, Model Power, Bachman and also import direct from the States.

'N' Lima, Bachmann, Atlas, Lifelike, Grafar, Minitrix.

'OO' Hornby (at discount prices), Grafar
'O' Atlas.

also Peco (at discounted prices eg SI100X \$1.73), Pola, H&M, Kibri, Faller etc.

Kalmbach books, Carstens books, Books direct from the U.S. & U.K., U.S. & U.K. Magazines both model and full size.

*MAIL ORDER a pleasure — SAE for lists.
BANK CARD — LAY BY*

MANSFIELD HOBBIES

100 Pacific H'wy,
Waitara, 2077
Phone 487 3188

Lay-by Bankcard
Trade-ins Repairs

MARKLIN SPECIALISTS

Railroad Supplies: Lima, Hornby, Wrenn, Roco, Bachmann, Arnold, Rivarossi, Locomotion, H & M, Prototype, Piko, Model Power, AHM, Peko, Ratio, Roundhouse.
Trackside kits, many makes. Books: Kalmbach, Carstens, Australian Model Railroad. Scratch Builders' Supplies: K & S, Plastruct, Kadee, X-acto, X-po, Zona.

*COME VISIT US, IF WE DON'T STOCK IT,
WE'LL TRY AND GET IT FOR YOU!
OPEN THURSDAY NIGHTS AND SATURDAYS.*

EL TORO TOYS

SPECIALS

8912 Jouef B.R. El. loco	\$29.95
5751 Intercity Coach B.R. Mk 3	
1st class	\$6.95
5752 Intercity Coach B.R. Mk 3	
2nd class	\$6.95

MAIL ORDERS WELCOME

Also Available:
PIKO — ROCO — LILLIPUT
Metric Screws & Nuts
Straight Gears Cut in Module
Turning & Milling Jobs Done.

Authorised JOUEF Repairer.

El Toro Toys
43 Currawang Street,
CONCORD WEST.
2138. Ph. (02) 73 5434

SANS SOUCI SPORTS AND HOBBIES

- Peco Electrofrog and Insulfrog Points, flex track ● Shinohara Points and code 100 flex track.
- Rivarossi ● Roundhouse ● Prototype ● Ratio ● Kadee ● Mahanotechnika
● Lima ● Kibri ● Heljan ● Bachmann ● Superquick ● Builder Plus

Brass sections tubes and sheets, Badger and Humbrol air brushes, Styrene sheet, BA screws, nuts, taps and drills, Lichen, Flock, Ballast, Cok underlay, etc . . .

- PMH bogies ● AMRI accessories ● Romford drivers, axles and gear sets
● MGW wheels ● Mn'J decals ● Sentinel and Prototype fittings.

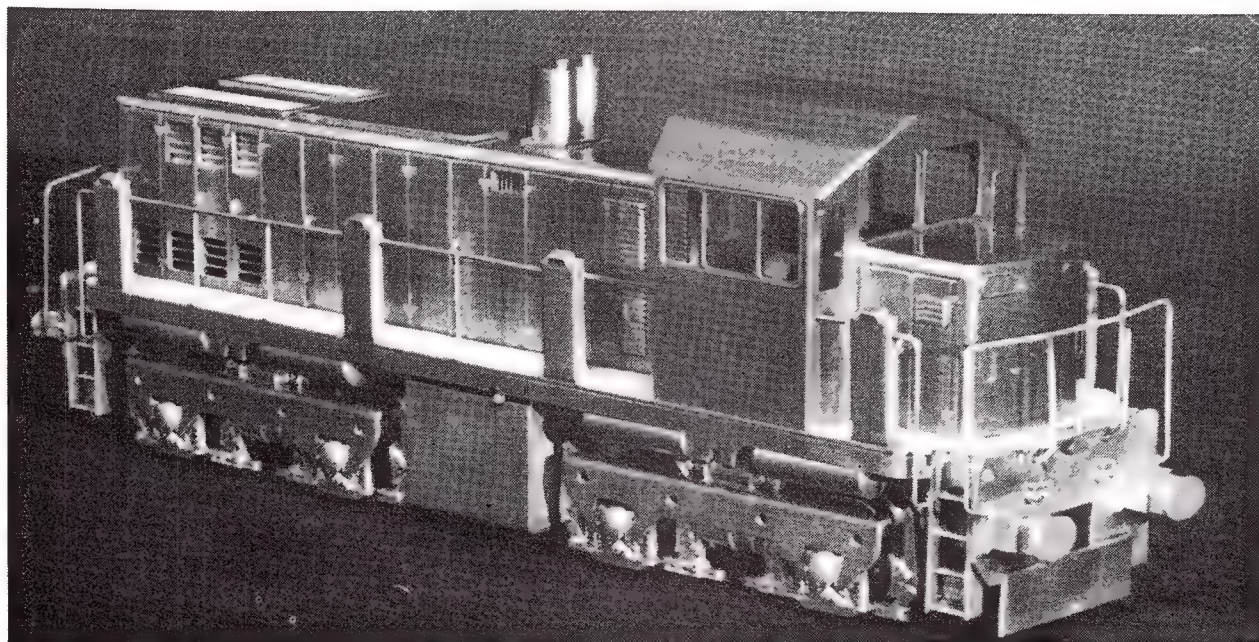
LOCOMOTION

Mk 3 control unit	\$45.50 ea
C. D. point power	\$14.85
Flasher unit	\$6.90
Ballast	\$1.95 bag

504 ROCKY POINT ROAD,
SANS SOUCI, NSW 2219
Phone (02) 529 9809

BERG'S HOBBIES

PRESENTS THEIR NEW MODEL



N.S.W.P.T.C. 73 class Diesel Hydraulic.

AVAILABLE EARLY JUNE.

The photo represents the pre production (pilot) model which is minus the headlights and horns, which will be added later. The model represents the second series version with the altered pilot (cow catcher). Introduced into service in 1970 the class is now 50 strong and can be seen at work at most major marshalling yards in N.S.W. The model is a brass crafted unit from Japan. The etched body is detailed with stampings and investment cast components. The drive is on all four axles via universal shafts and step down gearing.

THE LONG AWAITED 57 CLASS

Now In Stock. PRICE: \$325.00

This unit was the Express Goods Locomotive on the NSW railways for many years. The model, from Japan, in HO scale is powered on all drivers.

ALSO the 'FO' Coach.

PRICE: \$55.00

These coaches were in service in NSW for many years, not only providing accommodation in the Sydney, Newcastle and Wollongong suburban areas but also on journeys between the cities.

SPECIAL!!!

**FOR APRIL/MAY
BERG'S 'PHG' at \$50.00 ea.**

A fitting end for any goods train, this HO handcrafted brass model represents the wood bodied guards van that saw service in both steam and diesel era.

BERG'S HOBBIES. 223 CHURCH ST. PARRAMATTA.

Ph. (02) 635 8618



MODEL MASTERPIECES, LTD.

The EMERALD GAZETTE is proud to announce their appointment as Australasian Distributor for MODEL MASTERPIECES LTD, of Colorado, USA; whose fine scale products have already won a respected place on many Australian layouts.

Available immediately are quality products from -

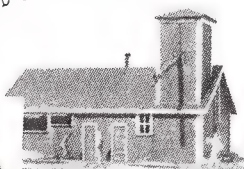
- # MODEL MASTERPIECES SCALE STRUCTURES series
- # MODEL MASTERPIECES HO SCALE DETAILS series
- # MINIATURE MACHINE WORKS series.

New releases will be added to the range on a regular basis.

Dealer and general inquiries are welcome as to existing items and for pre-release information.

Send (with SAE) for your price list now. . . .

Yours faithfully
EMERALD GAZETTE



CHOOSE FROM

Como Boilerhouse
Colo. Midland Sandhouse
Chalk Ck Bridge
Kokomo Cabin
Lyons Stone Depot
Cheesman Drug co.



Available now -

CHI Genuine Australian Colours -
Scatter Material - Fine Grade.*

* Pine - Gum - Forest
- Dry Grass
- Scrub - Spring - Red Dust

BEWARE
OF
TRAINS



DR. MORSE'S
INDIAN ROOT
PILLS
FOR THE LIVER

Emerald Gazette - Australian Signs - Series One - over 150 individual signs, adverts, logos - 1920's to 1950's

Emerald Gazette - Australian Series Figurines for scale modellers

† Trio of young ladies (HO) 1900's
† "Dad & Dave's" Mum - for the selection (HO)
† Jim (of the Hills) Bush Worker (HO)
† The Station Master (1910+) (HO & N)

Bonus! A limited quantity of
HETCH HETCHY SCALE MODELS are
also available

ASK YOUR DEALER FIRST
or send S.A.E. to -

EMERALD GAZETTE (CHI Products)
4 View Street, Upway, 3158.
(03) 754 3118.

NEW from WALTERS

HO Catalog 1978 edit.	\$4.00
O Catalog 1977 edit.	3.00
N Catalog 1977-8 edit.	2.00
Passenger Car Plan Book.	
U.S. models, revised edition.	
84 pages	3.00
1977 Decal Catalog which includes	
Walthers, Microscale	1.50
Prototype Lettering Diagram Books,	
shows colour, lettering etc., for	
Rolling Stock, Diesels	
*1 1940-50's 46 pages	1.95
*2 1946-56 88 pages	2.85
*3 1950's-60's 116 pages	3.50
*4 1962-66 76 pages	3.50
Handy reference guide for Decal	
application	
00-90 Taps ea.	0.60
00-90 Drill & Tap sets. ea.	2.50
00-90 Screws 3/16 inch long, brass	
flat & round head. Pkt. 20	1.25
00-90 Nuts. Pkt. 20	1.25
00-90 Washers. Pkt. 20	1.25

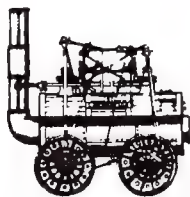
Taps, Screws for 0-80, 2-56 to arrive -
Write for details.

Full Range K & S metal shapes, Rounds,
Flats, Angle, Channel, etc.
Lists 30¢ posted.

Orders over \$10.00 post free.
Mail Order a Pleasure.

J. & J. HOBBIES

P.O. Box 155.
BEAUDESERT.
Qld. 4285.
Ph.(075) 41 1014



When it's Electronics for Model Railways it's Locomotion

Why look elsewhere when Locomotion
manufactures high quality electronic
devices and accessories for model
railways.

We suggest a CAPACITOR DISCHARGE
unit to fire points that are sluggish or sticky.
No more point motor burnouts with this
unit even if the firing button sticks down.
Only one unit required per layout.
Excellent value at \$16.65.

We have press buttons for points valued at
\$1.65 for pkt of 4.

See all our products on display at:
CASULA HOBBIES & NEWSAGENCY
Shop 7,
Demeyrick Ave & Hume Hwy,
CASULA (02) 602 1348

Send SAE for your free catalogue or pick
one up from your nearest Locomotion
stockist.

Trade enquiries to
LOCOMOTION 14 Jennifer Crescent,
THIRROUL 2515.

MARKLIN

NEW AND USED MARKLIN at DISCOUNT PRICES

Write for details of rare Marklin locos and
rolling stock, such as G800, DT800,
RSM800, SE800, CM800, GN800, 3011,
3014, 3046, 3047, 3048, 3059, 3076 and
many others.

The following lines also equipped: Roco,
Vollmer, Kibri, Pola, Rivarossi, Brawa,
Preiser, Peco, Fleischmann, Arnold,
Merten, Wiking, Liliput, Mehanotekhnika.

Orders now being accepted for new
Marklin 1978 productions.

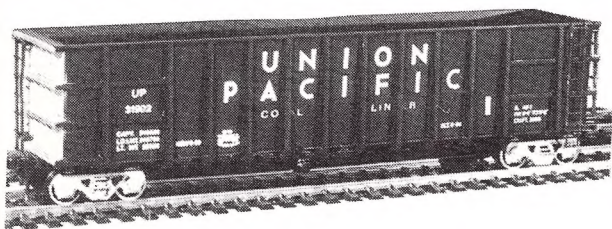
We specialise in the supply of Marklin
spare parts and Marklin repairs at
reasonable rates. All Marklin repairs
unconditionally guaranteed.

Mail order is our business
Try our prices first

TRAINWORLD HOBBIES

P.O. Box 490,
CAMPBELLTOWN, N.S.W. 2560
(046) 25 5861 (after hours)
(046) 25 1745 (after hours)

** LOCOMOTIVE KITS ** FREIGHT & PASSENGER CAR KITS ** FREIGHT & PASSENGER BOGIES ** ACCESSORIES



New! **THRALL High Sided Gondola**

\$5.75

1640 UNLETTERED
1643 UNION PACIFIC

3 bay Hoppers (6 bin)

\$3.75

1489 VIRGINIAN
1493 D. & R. G. W.
1494 UNION PACIFIC
1495 C. & O.
1496 B. & O.
1497 ONTARIO NORTHLAND
1498 BURLINGTON NORTHERN



Billboard Reefers

\$5.95

3130 COLUMBIA SOUPS
3140 MERCHANT DISPATCH
3142 LIBBY'S PICKLES
3143 FRUIT GROWERS EXPRESS
3144 A. BOOTH & CO.
3147 GOLDEN BULL
3149 HERSHEY CHOCOLATE

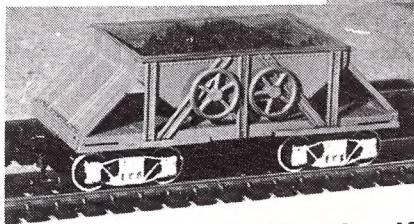
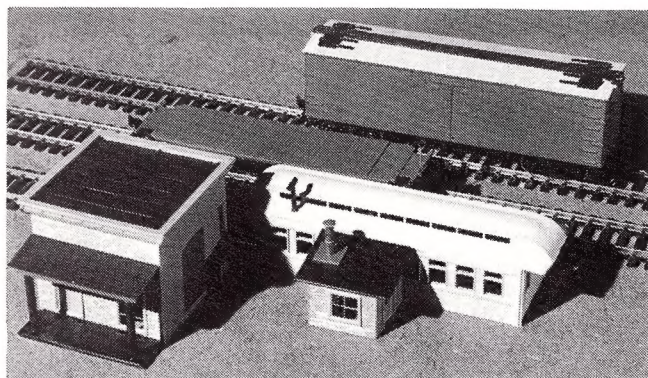
3 in 1 Kits

\$9.50

1507 TANK CAR (MW Fire Fighting)
1508 STEEL ORE JIMMIES
1509 SKELETON LOG CARS & ASSAY OFFICE

RETURNING TO STOCK

1504 WAYSIDE KIT No.1
1505 WAYSIDE KIT No.2
1506 WAYSIDE KIT No.3



Steel Ore Jimmy from 1508

3 in 1 kit No. 1505 as built by Jim Grant. The only part not supplied with the kit is the scribed sheet used to deck the flat car.

Prices in this advertisement are recommended prices only and there is no obligation for dealers to comply with the recommendation.

from good hobby shops everywhere

FOR TRADE AND GENERAL ENQUIRIES:-

AUSTRALIAN MODEL CRAFT CO., 577 Dean St., Albury, N.S.W. 2640 (P.O. Box 118)

HOBBYSHOP DIRECTORY

N.S.W. — MERRYLANDS

We try our most to stock a host of HO/OO, 009, TT&N scale equipment. Why not pay us a call and have a browse 'round or drop us a line for our latest price list. Mail order a pleasure.

ALCE'S HOBBY SHOP

Shop 6, 20 McFarlane St, Merrylands (P.O. Box 257). Ph. (02) 682 3775.

W.A. — MT LAWLEY (Perth)

For all model railways
model planes

Meccano sets, etc
Scalextric
Plastic kits, etc.

JACK STANBRIDGE'S HOBBY SHOP

19 Guildford Rd, Mt Lawley (at the subway).
Ph. (092) 718929.

S.A. — ADELAIDE

The Model Railroad Headquarters for S.A. Specialising in HO & N scales — Hornby — Rivarossi — Roundhouse — Athearn — Peco — Graham Farish — Ratio — Shinohara — Kadec. Railroad books, magazines and records. Large scenic range: Falter — Vollmer — Heljan — Kibri. BANKCARD, MAIL ORDER and REPAIR SERVICE.

BRIDGLANDS HOBBIES

91a Gawler Pl, Adelaide, 5000. Ph (08) 2124297.

S.A. — WHYALLA

Stockists of Lima, Hornby, AHM, Bachmann, Peco, Roco, Herpa, Pola Kits, ZPL, Rivarossi, Tempest Auto-Pulse Controllers, Tyco and Prototype. Mail Orders Welcome. Write or Call on us.

WESTCOAST MODEL SUPPLIES

90 Wood Tce, Whyalla, 5600.
Ph. AH (086) 450679.

SUBSCRIBERS

For continuity of subscription it is essential that the subscription renewal form and accompanying money be received at the AMRM office 4 weeks before the expected publication date.

The advertising deadline for the May/June 1978 issue of the Australian MODEL RAILWAY Magazine is the 21st April 1978. Please be early.

N.S.W. — SYDNEY

For the model railroad specialist, where the emphasis is on the modeller and his requirements. Regular shipments of specialist lines will arrive each month.

KEITH HUDSON'S MODELLERS WORLD

75 Goulburn St, Sydney, 2000.
Ph (02) 212 1667

N.S.W. — LIVERPOOL

Come and see the Fantastic range of Kits and Model Railway goodies at our new address. Laybys, Bankcard and even cash welcome.

THE FANTASTIC TOY & MODELSHOP

No 1, Woolworths Phoenix Plaza, Liverpool, 2170.
Ph. (02) 602 1256.

N.S.W. — WOLLONGONG

Don't let the name fool you. We are serious modrail stockists. As well as standard lines, we stock Marklin — Peco — Shinohara — Athearn — Kadec — Roco HO3 (HOe) — Kadec 'N' — Kalmbach hard & soft cover M.R. books — R.M.C./Railfan — AHM — Roundhouse — All brands repaired (subject to parts availability) Mail Order Welcome.

KIDS THINGS TOYS & TRAINS

86 Princes Hwy, Fairy Meadow, 2519.
Ph. 840382

N.S.W. — FAIRFIELD

We're new and expanding. We now stock Lima, Hornby, Tyco, Bachmann, Marklin, AHM, Mechano, Falter, Vau-Pe, Heljan, AMRI Products, Kadec, Scenic Materials, tools, K & S brass & alum sect, balsa, etc. Also Radio Control Specialists. Sales & Service. Mail Order by Bankcard — Ask for details from Bill or Stan.

WESTSIDE HOBBY CENTRE

113 Ware St, Fairfield, 2165. Ph (02) 727 0464.

N.S.W. — WOLLONGONG

Fleishmann, Seuthe Smoke Generators, Hag, Marklin (3 rail), Hamo, Vollmer, Peco, Locomotion Controllers, Wiking, Rivarossi, Superquick, Kalmbach. See advertisement on other page. MAIL ORDER, LAYBY & BANKCARD.

BILL WEBB

Australia Wide Mail Order
P.O. Box 68, Figtree, 2525 or 21 Mears Ave,
Mangerton, 2500. Ph. (042) 29 5824

N.S.W. — NEWCASTLE

BIG RANGE HO, OO & N gauge model railway equipment. Also stocks of Rivarossi, Hornby, Lima, Peco, Kadec, Roundhouse, Minitrix, Arnold Rapido, Athearn, Superquick and many others. Full range of building kits. Sales & Prompt Repairs. Authorised Hornby Servicing Agents.

VIC BARNES' HOBBY CENTRE

213 Lambton Rd, New Lambton, 2305.
Ph (049) 521886.

N.S.W. — SYDNEY

Fantastic models, shown by enthusiasts. Tremendous range OO, HO & N sets, loco's, track and accessories. Mail Orders, Layby's and Bankcard welcome.

THE FANTASTIC MODEL SHOPS

34 Angel Arcade, Ash St, Sydney, 2000 and
42 Park St, Sydney, 2000. Ph. (02) 232 2318.

N.S.W. — BLACKTOWN

We are the store for the enthusiast as well as the newcomer. We carry a full range of all HO & N gauge including Athearn, Rivarossi, Arnold, Roco, Roundhouse, Lima, Hornby as well as Locomotion products, AMRI products, Kadec, Prototype, Peco and Shinohara track to mention a few. We don't dabble in hobbies, we specialise.

MODEL MART

Post Office Arcade, Flushcombe Rd, Blacktown,
2148. Ph. (02) 621 4502.

VICTORIA — EAST KEW

SPECIALISED MODEL RAILWAYS

BRITISH 'O', 'OO' & 'N'

CONTINENTAL 'HO' & 'N'

AMERICAN 'HO' & 'N'

AUSTRALIAN AS AVAILABLE

Accessories a Speciality. Modellers Tools and Equipment.

HOBBYCRAFT

1351 Burke Road, East Kew, 3102. Mail Order
P.O. Box 88, Ivanhoe, 3079. Ph (03) 80 3241.

VICTORIA — MENTONE

A wide range of model railway supplies in OO—HO & N, including Hornby, Lima, Wrenn, Life Like, Bachmann, Peco, Falter, Herpa, Pola and scenic materials.

THRIFT PARK TOYS

16 Lower Dandenong Rd., Mentone, 3194

VICTORIA — SYNDAL

For all your hobby supplies, Hornby, Peco, Lima, Campbell, North Eastern timber, Athearn, etc.

N-K HOBBIES

264 Blackburn Rd, Syndal, 3149.
Ph (03) 233 2398

VICTORIA — HAMPTON

Excellent selection of HO & N trains... too many to mention... Service plus. Scratchbuilding supplies, parts & tools, K & S steel, Hobby Magazines, Hobby Kits, Tamaya, Matchbox & Airfix.

JOYCA — HOBBIES

465 Hampton St, Hampton, Vic.
Ph. (03) 5989768

This publication accepts no responsibility for the accuracy or reliability of articles or advertising contained herein, statements made or opinions expressed in papers or discussions, nor do we necessarily subscribe to the views expressed or implied by contributors. Neither is any guarantee implied or expressed as to good conduct or practise of advertisers herein. This publication reserves, at all times, the right to refuse acceptance to any matter considered unsatisfactory for publication.

Ist
WITH

MAINLINE

Ist

hobbycraft

MINERAL WAGONS
TANK WAGONS
BOX VANS
BRAKE VANS

1351 BURKE RD. EAST KEW 3102
LNER J72 TANK BR COACHES
CLASS 45 DIESEL P.O. WAGONS
CATALOGUE AND PRICE LIST POSTED — 85c

NOW FROM JOUEF

SUPERB AUSTRALIAN TRAIN SETS

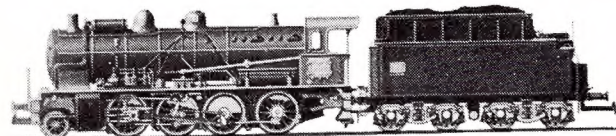
N.S.W. 73 CLASS DIESEL FREIGHT SET. 73 CLASS DIESEL LOCO, 3 GOODS WAGGONS, BUILDING, OVAL TRACK AND BATTERY BOX.

N.S.W. 46 CLASS PASSENGER SET. 46 CLASS ELECTRIC LOCO, 2 PASSENGER COACHES, BUILDING, OVAL TRACK AND BATTERY BOX.

AND FOR THE ENTHUSIASTS..



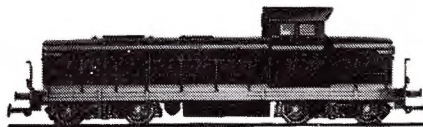
8912 C.C. CLASS 40 B.R. DIESEL ELECTRIC LOCO



8283 140C CONSOLIDATION LOCO AND TENDER



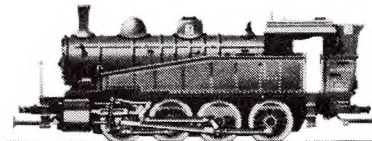
5751 1st CLASS B.R. MARK III PASSENGER COACH



8531 B.B. DIESEL ELECTRIC LOCO



8256 231K PACIFIC LOCO AND TENDER



8292 040T STEAM LOCO

JOUEF RACEWAYS

$\frac{1}{40}$ th. SCALE HOME RACEWAY SETS

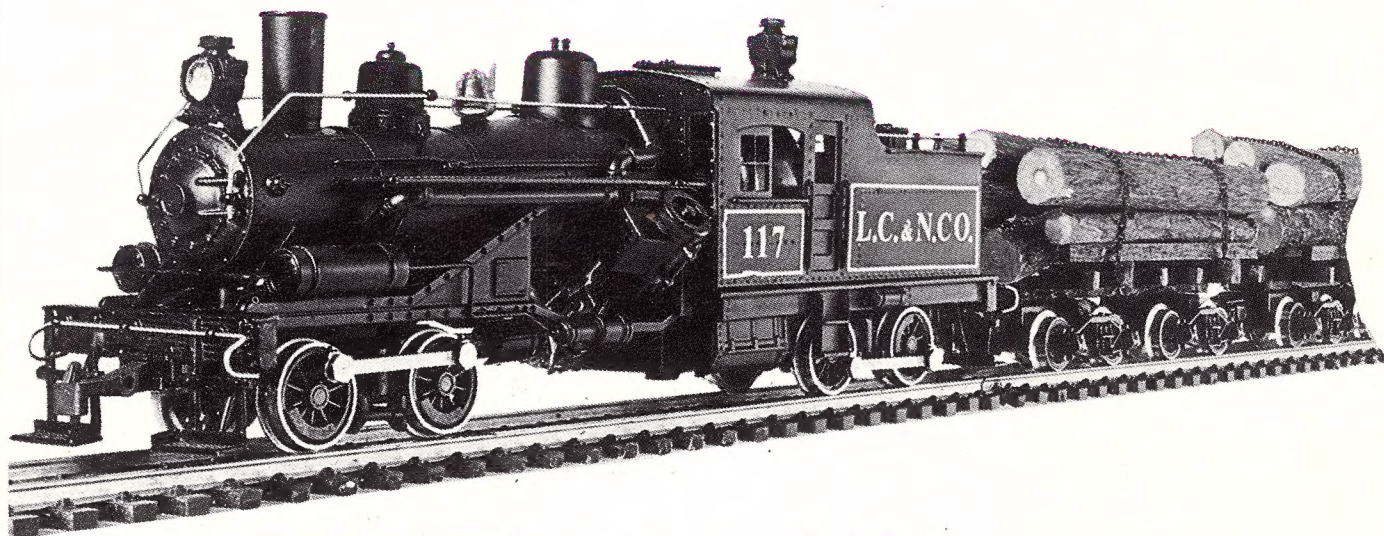
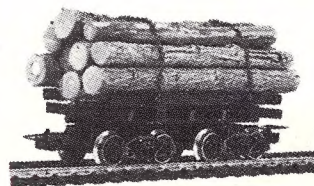
NOW AVAILABLE . . .
4 SETS, 25 CARS,
FULL RANGE OF
ACCESSORIES, INCLUDING
TRACK, HAND CONTROL,
BRIDGE, ETC.

DISTRIBUTED AND SERVICED BY CYCLOPS IN ALL STATES

New in HO/00

RIVAROSSİ

HEADS FOR THE TALL TIMBERS



the "HEISLER" now available

1219 THE LONG AWAITED "HEISLER" IS HERE NOW. MOTIVE
POWER FOR YOUR LOGGING ROAD OR SHORTLINE. THE
MODEL IS 130mm LONG AND HAS A WORKING HEADLIGHT

\$92⁵⁰

with LOG BUGGIES

2349 "LOG BUGGY" WITH ARCH BAR TRUCKS AND LOG LOAD
110mm LONG

\$6⁷⁵

& a SET

246 "TIMBERJACK" TRAIN - A SET COMPRISED OF HEISLER
LOCOMOTIVE AND FOUR LOG BUGGIES WITH LOG LOADS.

\$118⁷⁵

FOR FULL LISTING OF RIVAROSSİ HO/00, N & O GAUGES
SEE AMC PRICE LISTS SERIES "R"

* ALL LOCOMOTIVES ARE TESTED AND ADJUSTED *
* TO FAIR AVERAGE QUALITY STANDARD BEFORE *
* BEING RELEASED FOR SALE. *

Prices in this advertisement
are recommended prices only
and there is no obligation
for dealers to comply with
the recommendation.

★★★★★ *from good hobby shops everywhere*

FOR TRADE AND GENERAL ENQUIRIES:-

AUSTRALIAN MODEL CRAFT CO., 577 Dean St., Albury, N.S.W. 2640 (P.O. Box 118)